U.S. Department of Transportation
United States Coast Guard

Commandant
United States Coast Guard

2100 2nd Street, SW
Washington, DC 20593-0001
Staff Symbol: G-WKS
Phone: (202) 267-1883

COMDTNOTE 5100
FEBRUARY 28, 2002

COMMANDANT NOTICE 5100

CANCELLED:
FEBRUARY 27, 2003

Subj: CH-6 TO SAFETY AND ENVIRONMENTAL HEALTH MANUAL, COMDTINST M5100.47

1. PURPOSE. This Notice publishes revisions to the Safety and Environmental Health Manual, COMDTINST M5100.47. Intended users of this directive are all units that maintain the manual.

2. APPLICATION. The policies and procedures in this manual apply to all Coast Guard facilities and personnel. This manual promulgates internal guidance intended to promote efficiency and consistency in public service above and beyond the requirements of law or regulation. Any obligations discussed flow only to the Coast Guard. Coast Guard personnel are expected to exercise good judgment in performing the functions discussed. The Coast Guard retains the discretion to deviate from or change this guidance without notice. This Manual creates no duties, standards of care, or obligations to the public and should not be relied upon as a representation by the Coast Guard as to the manner of proper performance in any particular case outside of the Coast Guard.

3. ACTION. Area and district commanders, commanders of maintenance and logistics commands, commanding officers of headquarters units, and assistant commandants for directorates and special staff offices at Headquarters shall ensure compliance with the provisions of this Notice.

4. SUMMARY OF CHANGES. These documents are substantially revised and must be completely reviewed. The Table of Contents has been updated to reflect this change. CH-6 has been bar-marked. The following is a summary of major change areas:

   a. The Safety and Environmental Health Manual, COMDTINST M5100.47 Chapter 1 "Safety and Environmental Health Program" shifts the paradigm for the Coast Guard's safety and environmental health program from one primarily rooted in compliance to one that emphasizes the concept of managing risks before mishaps occur. Other improvements in this change include uniform methods of categorizing risks and using safety checklists, implementation of a process for identifying service-wide safety priorities, and improved descriptions of information resource and training responsibilities.

   b. Chapter 2, "Aviation Safety Program," has been completely rewritten to reflect changes in both the Coast Guard Aviation Safety Program and the Coast Guard Safety And Environmental Health

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Program. The revised Chapter 2 formalizes many of the interim and informal procedures currently used in the Aviation Safety Program, including but not limited to, the Flight Safety Officer selection process, non-flight related air station safety duties and responsibilities, procedures governing the mishap voice and data recorders, aviation specific mishap reporting requirements, Headquarter level recurring Aviation Safety Standardization Visits and the evolving maintenance resource management program.

c. Enclosure (5), FORMAT AND DIRECTIONS FOR THE COAST GUARD AVIATION MISHAP MESSAGE provides an updated format for the aviation mishap messages and reflects the new labor rate of $18 per hour.

d. Enclosure (18), ASSIGNING SAFETY AND HEALTH RISK ASSESSMENT CODES (RAC), has been added to the Safety and Environmental Health Manual.

5. PROCEDURES. No paper distribution will be made of changes to this Manual. Official distribution will be made via Coast Guard Directives System CD-ROM and the Department of Transportation website at: http://isddc.dot.gov/. An updated electronic version of the entire Manual, changes, and announcement ALCOASTs are available via the Commandant (G-WK) Publications and Directives website at: http://www.uscg.mil/hq/G-W/g-wk/g-wkh/g-wkh-1/Pubs/Pubs.Direct.htm. Message notification will announce changes and effective dates.

a. Remove and insert the following pages:

Remove:	Insert:
Table of Contents	Table of Contents, CH-6
Chapter 1	Chapter 1, CH-6
Chapter 2	Chapter 2, CH-6
Enclosure (5) p. 1,2	Enclosure (5) p. 1,2, CH-6
	Enclosure (18), CH-6

6. SPECIAL INSTRUCTIONS. Authority, responsibility, and additional sections and paragraphs in Chapter 1 are specifically referenced by other chapters in the Manual. With CH-6, the alphanumeric sequence is no longer valid. As the entire Manual is currently under revision, the specific section and paragraph references in other chapters will not be corrected at this time, but will be corrected when that chapter is revised. In the interim, any reference to a specific section in Chapter 1 by another chapter of the Manual should be considered only a reference to Chapter 1 without a section number. The information is still there but under a different section or paragraph alphanumeric designation.

JOYCE M. JOHNSON
Director of Health and Safety

Encl: (1) CH-6 to Safety and Environmental Health Manual, COMDTINST M5100.47

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ENCLOSURES

CHAPTER 1 SAFETY AND ENVIRONMENTAL HEALTH PROGRAM

A. Policy.

1. The Coast Guard's policy is to provide Coast Guard personnel and their families safe, healthful places to work and live and to comply with applicable safety and health laws, regulations and directives. Individuals have a responsibility for their own safety and health. Commands are responsible for the safety and health of assigned members, dependants in Coast Guard housing, all persons aboard their facility and those who may be affected by their operations. Maintenance and Logistics Commands provide safety and health support to all commands in their areas of responsibility.

2. The Coast Guard's fundamental safety and environmental health principle, applicable at every level in the organization and for every mission or activity, is to continually manage the safety and environmental health risks confronting Coast Guard personnel in their professional and private lives to acceptable levels and never to accept unnecessary risks. This principle will be applied by identifying hazards, assessing their risk and controlling risks to acceptable levels, consistent with the mission or activity being performed. Reducing risks will benefit individual members and all levels of the Coast Guard organization by preserving mission readiness and by reducing fatalities, the incidence of injury and disease, and the loss of property.

B. Mission. The mission of the safety and environmental health support program is to ensure the safety and health of Coast Guard personnel, to preserve Coast Guard material resources, and to protect public lives and property from endangerment by Coast Guard operations. The program will accomplish these goals by establishing safety and environmental health policies, enforcing those policies, and providing certain resources necessary for implementing those policies.

C. Purpose. The purpose of this Manual is to promulgate safety and environmental health policies, standards and guidelines and define safety and environmental health responsibilities.

D. Scope. Safety and environmental health policies, standards and guidelines in this Manual apply to:

1. Coast Guard active duty military personnel, on and off-duty.

2. Coast Guard appropriated and non-appropriated fund civilian personnel, on-duty and/or on Coast Guard property.

3. Coast Guard Reserve personnel on active duty, active duty for training or inactive duty for training.

4. All Coast Guard afloat and ashore facilities and aircraft.

5. Coast Guard Auxiliary personnel and facilities under orders.

6. Dependents of Coast Guard military personnel on Coast Guard owned or leased property.

7. Non-appropriated fund activities and facilities.

8. Contractors performing Coast Guard work on government facilities. Although contractors are primarily responsible for providing safe working conditions for their employees and ensuring compliance with OSHA regulations, the Coast Guard has overall administrative responsibility for its facilities and is responsible, under Executive Order 12196 (EO 12196) and in accord with the Occupational Safety and Health Act, to take reasonable steps to correct, or to require the correction of, hazards of which it could reasonably be expected to be aware.

E. Authority.

1. EO 12196, Occupational Safety and Health Programs for Federal Employees, requires the Coast Guard to maintain a safety and occupational health program in accordance with the Occupational Safety and Health Act of 1970 for civilian employees (Occupational Safety and Health Administration (OSHA) 29 CFR 1960 Basic Program Elements for Federal Employees). Although Coast Guard military personnel and uniquely military equipment, systems, and operations are not covered by the Executive Order and OSHA, military personnel performing operations and activities not uniquely military, e.g., industrial activities, are included in the program by direction of the Commandant as provided in this Manual. (See also 1.G for futher explanation of OSHA's relationship.)

2. The Coast Guard and Coast Guard personnel are subject to Executive Orders; Federal laws, regulations and directives; and certain state and local laws and ordinances.

F. General Program Description.

1. The fundamental safety and environmental health risk management process is a subset of the Coast Guard's overall risk management policy described in Operational Risk Management, COMDTINST 3500.3. It focuses on the identification of hazards to Coast Guard lives, health, missions and property; evaluation, categorization and determination of confidence level of identified risks; and the control or abatement of the risks to an acceptable level, consistent with the mission. Risk management is a continual process and is primarily an individual and unit responsibility, facilitated, where necessary, and monitored by safety and environmental health professionals. The three primary steps of the safety and environmental health risk management process are:

   a. Identification of Hazards. The essential first step of the safety and environmental health risk management process is the identification of all hazards that threaten personnel, mission and property under a unit's cognizance. Hazards may be identified by observation at the unit or similar unit or by analysis of prior performance.

   b. Risk Assessment. Risk assessment is a two-part process:

      (1) Risk Evaluation. Risks may be evaluated by measurement, estimation by experienced personnel or comparison to historical data. Risk evaluation determines the probability a hazard may precipitate a mishap and the mishap's likely severity in terms of injuries, health effects and property damage.

      (2) Risk Categorization.

         (a) Unabated risks shall be categorized with a risk assessment code (RAC) that reflects a combination of the probability and likely severity of a mishap determined during the risk evaluation process. There shall be five levels of risk, described by RACs One through Five, with RAC One being the highest risk category and RAC Five being the lowest:

            1. RAC One. An immediate and serious hazard that is likely to result in death or permanent total disability if not controlled. RAC One risks demand immediate cessation of the operation and abatement of the hazard.

2. RAC Two. A hazard requiring immediate control through the use of engineering controls, administrative procedures/work practices, or personal protective equipment (PPE). If feasible or practical, the hazards should be abated as soon as possible or within six months.

3. RAC Three. A hazard requiring control through the use of engineering controls, administrative procedures/work practices, or PPE. If feasible or practical, the hazards should be abated within the normal unit work cycle or engineering cycle.

4. RAC Four. A lesser risk requiring continuing surveillance to ensure the risk does not increase. Abatement is not required unless conditions change and require re-evaluation.

5. RAC Five. A negligible risk. Abatement or surveillance not required.

(b) RACs are determined using the criteria and charts contained in Enclosure (18) of this Manual. The estimated probability of a hazard leading to a mishap is determined using Charts 1 or 2 and the estimated severity of that mishap is determined using Chart 3. The risk assessment code is then found at the intersection of the probability and severity levels on Chart 4.

c. Risk Control. Risk control is the process of developing and implementing measures to control each risk. The preferred priority is (1) engineering controls; (2) administrative procedures/work practices (e.g. training, procedures, signs); (3) the use of personal protective equipment or combinations of these measures. Interim controls may have to be implemented and maintained to control risk until more permanent controls can be established and the risk abated. Risk control is the overall goal of the safety and environmental health risk management process.

2. Safety and Environmental Health Risk Management Tools and Processes. Safety and environmental health risk management is an on-going process and principles that should become part of the organizational culture. However, there are certain formal tools available for use by units to manage risks and for superiors in the chain of command to oversee risk management activities. They include:

   a. Unit Profile. A unit profile is a description of a unit's physical environment, its personnel, its activities and its operations, prepared to facilitate support and oversight of the unit's safety and environmental health risk management processes. Unit profiles are prepared, maintained and updated by the supporting MLC. The profile shall include:

      (1) Names and telephone numbers of key safety personnel.

      (2) Description of physical plant.

      (3) Description of all processes and operations involving recognized hazards.

      (4) Operations, Evolutions and Functions Matrix (if available).

   b. Coarse Risk Analysis. A coarse risk analysis is a tool for assessing the risks associated with a specific operation, process, item of equipment, or facility, using specialized software, trained risk assessors and experienced subject matter experts. Coarse risk analyses will normally be conducted on special risks identified by Headquarters program managers, safety and environmental health professionals or units and as designated by the Safety and Environmental Health Coordinating Board (SEHCB) or MLC (k)s. MLC personnel shall conduct the coarse risk with the assistance of subject matter experts from the field and/or higher echelons. The coarse risk analysis will categorize the risks associated with the operation being analyzed by assigning a risk assessment code, and it will determine a confidence level for the risk assessment categorization. It will suggest methods to control each risk, e.g., training, engineering controls, personal protective equipment, and administrative controls. Commandant (G-WKS) may specify a standard process and/or tools for conducting coarse risk analyses.

c. Detailed Risk Analysis. Detailed risk analysis is a careful investigation of a specific and often unique operation, process or facility that requires in-depth analysis to assess risks, e.g., a particular industrial process. Industrial hygienists, safety and occupational health specialists and managers or environmental health officers will conduct detailed risk analyses.

d. Unit Safety and Environmental Health Committees. Unit Safety and Environmental Health Committees are established to assist the Safety Officer in managing unit risks by identifying hazards, assessing risks and controlling risks. All units, except those units subordinate to a Group or MSO, shall have a unit safety and environmental health committee. Group or MSO subordinate unit representatives shall be included in Group or MSO safety and environmental health committees or shall, with permission of the Group or MSO, conduct unit-level safety and environmental health committees and forward minutes to the Group or MSO. Note: It is essential that parent and subordinate commands communicate and coordinate in policy and committee actions.

e. Unit Inspections. See section 1.F.3.a. of this Manual.

f. Special Emphasis Programs. Commandant (G-WKS) may direct measures to identify, assess or control specific risks including but not limited to:

(1) Aviation.

(2) Afloat Units.

(3) Environmental Health.

(4) Marine Safety

(5) Traffic.

(6) Firearms.

(7) Fire.

(8) Human Factors.

(9) Occupational Exposures.

g. Operational Risk Management (ORM). Although ORM describes a decision-making process that is primarily geared for tactical operations, its processes are general enough for use by personnel involved in all Coast Guard activities, on and off duty. It contains some simple, easy-to-use risk assessment tools that may be applicable for non-operational safety and environmental health activities.

h. Safety and Environmental Health Checklists. Checklists designed for use by unit personnel are available via the intranet on the MLC (kse) websites to assist units in identifying safety and environmental health hazards and program deficiencies. Separate checklists are designed for afloat and shore-based units. They are divided into sections, all of which may not be applicable for a particular unit. Most checklist items are self-explanatory and do not require access to reference material or extraneous documentation. The checklists form an excellent foundation for annual and semiannual formal inspections or anytime a unit may wish to evaluate its safety and environmental health programs.

i. Employee Hazard Reporting. Employees, being the most familiar with their workplaces and processes, are often the most knowledgeable of their associated hazards. To take advantage of this intimate knowledge to identify hazards and, ultimately, control risks, employees are encouraged to report hazards and are protected from any retaliation that may arise as a consequence. Coast Guard units shall provide ample work time to report hazards and no Coast Guard member, employee, or contractor shall take adverse action against any person for reporting perceived hazards. Though employees are first encouraged to resolve the issue through the chain of command, reports of hazards may be made verbally, in writing or electronically via e-mail or a reporting template at either MLC's website

3. Program Oversight and Monitoring.

a. Unit Inspections. Safety and environmental health are individual and unit responsibilities. The individual member and unit, therefore, are both responsible for identifying hazards, and the unit is primarily responsible for monitoring compliance with safe practices. Unit inspections are one of the tools the unit shall use to perform these functions. There are two types of unit inspections:

(1) Routine Inspection. Supervisory personnel may conduct routine inspections in conjunction with material inspections or other normal workplace inspections. The objective is to identify physical hazards, such as missing guards, blocked exits, damaged electrical cords, etc. and take corrective actions.

(2) Formal Unit Safety Inspection. Formal unit safety inspections are comprehensive, detailed inspections of a unit's safety and environmental health risk assessment processes as well as its spaces and equipment. The formal unit safety inspection shall be conducted at least once each year for all workplaces or more frequently at the discretion of the commanding officer or officer in charge. More frequent inspections shall be conducted in workplaces where high hazard operations and equipment may cause an increased risk of mishap, injury or occupational illness due to the nature of the work performed.

(a) Performed by unit personnel qualified to recognize hazards, evaluate risks and recommend general abatement procedures, e.g., trained Unit Safety Coordinator, Safety Petty Officer or Safety Officer. Units with no personnel trained to perform inspections may request assistance from cognizant MLC (k).

(b) Detailed inspection of machinery, spaces, procedures, and unit programs.

(c) Compliance-based inspection using appropriate sections of the unit safety and environmental health checklists promulgated by Commandant (G-WKS).

(d) Includes all spaces assigned to the unit and all processes conducted by the unit. Office spaces, shops, Coast Guard owned housing, vessels, aircraft, grounds, remote detachments, etc., of every unit shall be inspected.

(e) Formal inspections may be done in small components or in conjunction with other inspections over time as long as they are identified as SEH inspections (or findings having SEH implications); corrective action is taken; and the results are documented.

b. Unit Safety and Environmental Health Risk Assessment Survey. Responsible MLCs shall periodically audit unit level safety and environmental health programs. A major objective of MLC (kse) unit visits shall be implementation and support of risk management processes in all unit operations. Unit safety and environmental health surveys shall include the following items, if appropriate to the unit's mission and facilities:

(1) Review and update of unit profile.

(2) Review of unit mishap history, outstanding hazard reports, hazardous condition notifications, and reports of previous safety and environmental health surveys.

(3) Review of unit's report of most recent completion of standard safety and environmental health checklists.

(4) Review of effectiveness of unit's safety and environmental health risk management program.

(5) Review of targeted program effectiveness, e.g., operational risk management (ORM), hazard communication program, respiratory protection program, etc.

(6) Assessment of unit's extent of integrating ORM concepts into key daily activities and processes and into the unit safety and environmental health program, including a review of compliance with requirements of Team Coordination Training, COMDTINST 1541.1.

(7) Assessment of effectiveness of previously identified safeguards.

(8) Assistance to unit with problems revealed by checklists, mishaps, etc.

(9) Assistance with training.

(10) Detailed risk analyses, if required.

(11) Spot or targeted inspections to determine overall program effectiveness.

(12) Assignment of risk assessment codes for all identified risks.

(13) Preparation of a written report of findings and recommendations within 30 days to be provided to the Commanding Officer, with copies to the next higher level in the chain of command to Commandant (G-WKS) and to other commands that may be responsible for controlling or eliminating identified risks.

c. Headquarters MLC Safety and Environmental Health Program Evaluation. Commandant (G-WKS) shall evaluate MLC safety and environmental health support programs every two years. The program evaluation shall include but not be limited to:

(1) Compliance with the requirements of this Manual.

(2) Fundamental framework for providing safety and environmental health risk management support and oversight to units in their areas of responsibility.

(3) Unit safety and environmental health risk assessment surveys.

(4) Safety and environmental health data management systems.

(5) Safety and occupational health analyses for planning proposals and engineering designs.

(6) Incident response support.

(7) Special emphasis programs.

(8) Ad hoc assistance to field units.

d. Safety and Environmental Health Coordinating Board. The Safety and Environmental Health Coordination Board shall be comprised of the Chief, Office of Safety and Environmental Health (G-WKS); the Chief, Aviation Safety Division (G-WKS-1); the Chief, Shore Safety and Environmental Health Division (G-WKS-2); the Chief, Human Factors Division (G-WKS-3); the Chief, Afloat Safety Division (G-WKS-4); the Chiefs, Safety, Environmental Health, and Food Service Branches, MLC Atlantic and Pacific. The Chief, Office of Safety and Environmental Health shall chair the Coordinating Board. The Board will discuss and evaluate matters of safety and environmental health interest, charter committees to study specific issues and prioritize safety and environmental health issues.

G. Occupational Safety and Health Administration (OSHA).

1. Executive Order 12196 (followed by 29 CFR 1960 Basic Program Elements for Federal Employees) apply to Coast Guard civilian employees and to operations, equipment and systems that are comparable to those of industry in the private sector such as vessel, aircraft and vehicle repair, overhaul, and modification; construction; supply services; civil engineering; medical services and office work. They apply to all working conditions of Coast Guard civilian employees except those involving uniquely military equipment, systems, and operations. Uniquely military workplaces include cutters and aircraft. Uniquely military operations include activities such as search and rescue and the operation of cutters and aircraft. Although exempted from OSHA standards by the Occupational Safety and Health Act of 1970 and Executive Order 12196, Coast Guard military personnel, except where engaged in uniquely military operations, shall also comply with and units shall enforce OSHA standards where practicable or utilize alternate occupational safety and health standards that are as stringent as OSHA standards. OSHA shall be authorized to conduct announced or unannounced inspections and evaluations at Coast Guard sites employing civilian personnel engaged in other than uniquely military activities. Except for uniquely military workplaces and operations or those where only military personnel are employed, OSHA's inspectors and evaluators are authorized to:

   a. Enter, without delay, during regular work hours, any building, installation, facility construction site, or other area, workplace or environment where work is performed by Coast Guard civilian employees or contract employees.

   b. Inspect and investigate, during regular working hours and at other reasonable times, all pertinent conditions, structures, machines, devices, equipment and materials.

   c. Privately question any civilian employee, any supervisory employee and/or any official in charge.

   d. Formally report on unsafe conditions encountered by civilian employees.

2. Employee Rights. The Occupational Safety and Health Act guarantees civilian employees and employee representatives the following rights:

   a. Access to copies of Coast Guard standards, procedures and injury and illness statistics.

b. Right to report unsafe or unhealthful working conditions to appropriate officials and to have their name kept confidential, if requested.

c. Right to assist in conducting safety and health inspections.

d. Right to request, anonymously if desired, inspection of any work area alleged to possess unsafe of unhealthful conditions.

e. Right to appeal, through the chain of command to Commandant (G-WK) and ultimately to Commandant (G-CCS) if they disagree with the disposition of unsafe or unhealthful conditions.

f. Right to appeal to the Office of Federal Agency Safety and Health Programs, Occupational Safety and Health Administration, Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210, if all means of resolving an alleged unsafe or unhealthful condition within the Coast Guard have been exhausted.

Note: Agency safety and health programs must have provisions for responding to employees reports of unsafe or unhealthful working conditions and the Secretary of Labor encourages employees to use agency procedures as the most expeditious means of achieving abatement of hazardous conditions. It is recognized, however, that employee reports may be received directly by the Secretary.

g. Right to be protected from discrimination, restraint, interference, coercion, or reprisal as a result of participation in risk management processes.

H. Safety and Environmental Health Risk Management Standards.

1. Coast Guard Instructions and Directives. Coast Guard safety and environmental health instructions and directives shall prescribe Coast Guard safety and environmental health risk management processes, activities and standards and shall have precedence over all other standards. Coast Guard instructions may incorporate nationally recognized consensus standards as well as standards or instructions from other agencies, e.g., Department of Defense, by reference.

Note: For civilian employees, the more stringent of Coast Guard or OSHA standards will apply.

2. Federal Laws and Regulations. Federal laws and regulations, where applicable, govern the Coast Guard. Coast Guard instructions and directives shall meet or exceed compliance with Federal laws and regulations. Although military personnel and uniquely military operations are exempted from OSHA jurisdiction by Executive Order 12196, OSHA standards contained in Title 29 of the Code of Federal Regulations shall apply to Coast Guard operations and functions and to all personnel, where practicable, including operations, equipment and systems that are comparable to those of industry in the private sector such as vessel, aircraft and vehicle repair, overhaul, and modification; construction; supply services; civil engineering; medical services and office work.

3. Consensus Standards. Numerous associations, institutes and organizations publish consensus standards and codes designed to codify safe practices or designs within an industry or field of employment. Examples of these organizations include the American National Standards Institute (ANSI), National Fire Protection Association (NFPA), American Conference of Governmental Industrial Hygienists (ACGIH), NSF International, the National Institute for Occupational Safety and Health (NIOSH) and others. The National Technology Transfer and Advancement Act of 1995 (Public Law 104-113) requires Federal agencies to adopt consensus standards where practicable. Consensus standards may be made mandatory by reference in a Coast Guard directive or, in the event no Coast Guard directive or standard exists, shall be used as guidelines and standards of good practice.

4. Specific Service-wide Standards. The following standards are adopted for service-wide use:

   a. Exposure Limits. Threshold limit values (TLV) refer to airborne concentrations of substances or to energy intensities to which it is believed that nearly all workers may be repeatedly exposed 8 hours per day, 40 hours per week, day after day without adverse effect. These values, determined and published by the American Conference of Governmental Industrial Hygienists (ACGIH), are based on the most current toxicological data and workplace experience available and provide exposure guidelines. OSHA Permissible Exposure Limits (PEL), as published in 29 CFR 1910.1000, are federal standards and thus the law. OSHA PELs or ACGIH TLVs, whichever is more stringent, shall be considered the Coast Guard workplace standards for exposure to chemical substances and physical energies, except as specifically addressed in current Coast Guard directives. Unprotected Coast Guard personnel shall not be exposed to hazardous chemical substances or physical energies exceeding these limits.

b. Ventilation Design. Ventilation systems used for the control of hazardous materials in the work environment shall be designed in accordance with requirements of the most recent edition of the Industrial Ventilation Manual published by ACGIH, and OSHA standards published in 29 CFR 1910. Air flow and air capacity specifications for these systems shall be those cited in the Industrial Ventilation Manual.

c. Noise Standard. For Coast Guard, and in accordance with the ACGIH TLV, continuous noise levels at or above 85 dBA Time-Weighted Average (TWA) and impact noises exceeding 140dBA are considered hazardous. Noise exposures shall be calculated using a 3 dBA exchange rate. See section 1.P.24 of this Manual for the definition of TWA.

I. Safety and Environmental Health Organizational Roles and Responsibilities.

1. Department of Transportation. The Department of Transportation has delegated most Coast Guard safety and environmental health responsibilities to the Commandant. The Department acts as an intermediary between the Department of Labor and OSHA on most safety and environmental health matters. The Department also requires all DOT operating administrations to participate in the DOT Safety Council, a forum for promoting the safety of DOT employees and the public. Normally, the Director of Health and Safety, (G-WK), represents the Coast Guard at the DOT Safety Council, with support from (G-WKS).

2. Commandant.

a. Designated Agency Safety and Health Official (DASHO). The Chief of Staff (G-CCS) is the Designated Agency Safety and Health Official for the Coast Guard and is responsible for:

(1) Developing and promulgating safety and environmental health risk management and operational risk management policy.

(2) Establishing safety and environmental health risk management standards for equipment, systems and operations that are military unique or for which OSHA or appropriate consensus standards do not exist.

(3) Providing adequate resources to support safety and environmental health risk management policy and processes.

(4) Implementing procedures for evaluating the effectiveness of safety and environmental health and operational risk management processes throughout the Coast Guard.

b. Support Program Director for Safety and Environmental Health Risk Management. The Director of Health and Safety (G-WK) is the support program director for safety and environmental health risk management, and is responsible for assisting the Chief of Staff (G-CCS) in carrying out the DASHO duties.

c. Support Program Manager for Safety and Environmental Health Risk Management. The Chief, Office of Safety and Environmental Health (G-WKS) is the support program manager for safety and environmental health risk management, and is responsible for:

(1) Providing staff support to the Chief of Staff (G-CCS) and the Director of Health and Safety (G-WK) in managing safety and environmental health and operational risks, including:

(a) Developing safety and environmental health risk management policy.

(b) Managing the safety and environmental health portion of the AFC56 training account and selected special emphasis training, including assessing and defining training requirements, curriculum development and specific course quota management.

(c) Convening Class A and B Mishap Analysis Boards, when warranted, and managing the mishap analysis process.

(d) Collecting and analyzing risk management data.

(e) Participating in the programming, planning and budgeting process to obtain or reallocate safety and environmental health risk management resources.

(f) Conducting special studies and evaluations, including but not limited to prototype or unique equipment, processes, operations and procedures.

(g) Managing special emphasis areas, including but not limited to:

1. Aviation safety

2. Marine safety

3. Environmental health

4. Fire safety

5. Traffic safety

6. Human factors

7. Afloat safety

8. Occupational Medical Surveillance and Evaluation

(h) Forming partnerships and alliances to leverage resources and maximize risk management effectiveness.

(i) Conducting Headquarters MLC Safety and Environmental Health program evaluations and special inspections.

(j) Reviewing major acquisition planning proposals and participating on matrix design and configuration control boards. (Includes acting as a voting member on all cutter and boat Configuration Control Boards.)

(k) Providing specialized expertise to field units.

(l) Representing or providing support to Coast Guard representatives to the DOT Safety Council.

(m) Convening the Safety and Environmental Health Coordinating Board.

(n) Establishing safety and environmental health priorities and coordinating efforts to address them.

3. Area and District Commanders. Area and district commanders are responsible for:

   a. Practicing operational risk management for all operations under their operational control.

   b. Complying with responsibilities for supporting Operational Risk Management as described in Operational Risk Management, COMDTINST 3500.3.

   c. Implementing unit level risk management at Area and District Headquarters.

   d. Ensuring compliance, by units within their chains of command, with Coast Guard safety and environmental health directives, as implemented by the designated regional safety and health manager.

4. MLC Commanders. MLC Commander (k) are Chief, Health and Safety and provide oversight and resources for the Safety and Environmental Health Program within their area of responsibility.

5. MLC Support Program Manager for Safety and Environmental Health Risk Management. The Chief, Safety and Environmental Health, MLC (kse), is designated the regional safety and health manager and is responsible for providing the necessary support and direction to implement an effective safety and environmental health program at all districts, area units and headquarters units located within their organizational and geographic area of responsibility. These responsibilities include, but are not limited to:

   a. Developing a framework to support Area, MLC and District units, and headquarters units without full time safety and health staff in meeting their safety and environmental health program responsibilities.

   b. Preparing and maintaining unit safety and environmental health profiles as described in section 1.F.2.a. of this Manual.

   c. Conducting unit safety and environmental health risk assessment surveys, as outlined in section 1.F.3.b. of this Manual, for: (a) Area units on behalf of the Area Commander; (b) district units on behalf of district commanders; and (c) headquarters units on behalf of Commandant (G-CCS). Unit safety and environmental health risk assessment surveys shall be conducted:

(1) Annually for high-risk units, including Area Cutters, Integrated Support Commands, Marine Safety Offices, buoy tenders, air stations and the Yard.

(2) At least triennially for all other units. More frequent risk assessment surveys may be necessary at units with high personnel turnover or short tours of duty to ensure program continuity.

e. Providing safety and environmental health risk management advice and facilitating the integration of operational risk management, as necessary.

f. Implementing and maintaining a hazardous condition notification (HCN) tracking database meeting the requirements of enclosure (1) to this Manual.

g. Implementing and maintaining an employee hazard reporting procedure and log meeting the requirements of enclosure (1) to this Manual.

h. Implementing and maintaining a mishap investigation and reporting database meeting the requirements of Chapter 3 to this Manual.

i. Implementing and maintaining an industrial hygiene sampling database meeting the requirements of enclosure (8) to this Manual.

j. Reviewing engineering designs to ensure compliance with safety and environmental health laws and regulations.

k. Conducting detailed safety and environmental health risk assessment surveys and studies as described in section 1.F.2.c. to this Manual.

l. Reviewing employee hazard notices and investigating these notices when necessary.

m. Providing technical assistance to units on request.

n. Managing safety and environmental health training programs specified by Commandant (G-WKS), including quota management, slate preparation, vendor selection and management. See section 1.N to this Manual.

o. Nominating issues of highest safety and environmental health priorities.

p. Providing a representative to the Safety and Environmental Health Coordinating Board when convened by Commandant (G-WKS). See Section 1.F.3.d to this Manual.

6. Group or MSO Commanders. Group or MSO commanders are responsible for:

a. Ensuring that safety and environmental health and operational risk management processes are utilized to reduce and maintain risks at acceptable levels throughout the group.

b. Complying with responsibilities for supporting Operational Risk Management as described in Operational Risk Management, COMDTINST 3500.3.

c. Ensuring compliance with the applicable Federal and Coast Guard safety and environmental health standards and regulations of section 1.H. to this Manual.

d. Appointing a unit Safety Officer, normally the Executive Officer, and if warranted, a Unit Safety Coordinator. See sections 1.J.3. and 2.J.5. to this Manual.

e. Implementing a group safety and environmental health risk management framework covering all subordinate units in accordance with this Manual, including but not limited to:

(1) Group and subordinate unit safety and environmental health training as outlined in section 1.N. to this Manual.

(2) A group safety and environmental health committee consisting of at least the group safety officer, group safety coordinator and representatives from all group units. See section 1.F.2.d. to this Manual.

(3) Specific hazard related programs, e.g., respiratory protection, confined space, hazard communication, covering all group units where the specific hazards exist.

(4) Conducting hazard assessments and providing all appropriate personal protective equipment.

(5) Coordination of MLC support to group units. See section 1.I.4. to this Manual.

(6) Conducting annual and semi-annual inspections of the group and subordinate units as described in Section 1.F.3.a. to this Manual.

(7) Investigation of group and subordinate unit mishaps and review of unit mishap reports as outlined in Chapter 3 to this Manual.

7. Unit Commanding Officers. Headquarters unit commanding officers and unit commanding officers and officers in charge not subordinate to a Group or MSO shall be responsible for:

a. Ensuring that safety and environmental health and operational risk management processes are utilized to reduce and maintain risks at acceptable levels throughout the command.

b. Complying with responsibilities for supporting Operational Risk Management as described in Operational Risk Management, COMDTINST 3500.3.

c. Ensuring compliance with applicable Federal and Coast Guard safety and environmental health standards and regulations of section 1.H. to this Manual.

d. Appointing a unit Safety Officer, normally the Executive Officer, and, if warranted, a Unit Safety Coordinator. See sections 1.J.3. and 1.J.5. to this Manual.

e. Implementing a unit safety and environmental health risk management program, including but not limited to:

(1) Unit safety and environmental health training as outlined in section 1.N. to this Manual.

(2) A unit safety and environmental health committee consisting of at least the unit safety officer, unit safety coordinator and representatives from the unit. See section 1.F.2.d. to this Manual.

(3) Specific hazard related programs, e.g., respiratory protection, confined space, hazard communication, covering all group units where the specific hazards exist.

(4) Conducting hazard assessments and providing all appropriate personal protective equipment.

(5) Coordination of MLC support to the unit. See section 1.I.4. to this Manual.

(6) Conducting annual (or more frequent if required) inspections of the unit as described in Section 1.F.3.a. to this Manual.

(7) Investigation of unit mishaps and review of unit mishap reports as outlined in Chapter 3 to this Manual.

8. Supervisors and Managers. Supervisors and managers of other employees shall:

a. Apply applicable risk management processes to reduce and maintain safety and environmental health and operational risks at acceptable levels, both on and off duty

b. Seek additional guidance from superiors in the chain of command when risks associated with a mission seem unnecessary or exceed the commander's intent.

c. Ensure their employees are provided adequate training on the hazards and operations of their work processes and equipment.

d. Conduct daily walk-through of active work areas, where feasible.

9. Individual Members and Employees. Individual members and employees shall:

a. Apply applicable risk management processes to reduce and maintain safety and environmental health and operational risks at acceptable levels, both on and off duty.

b. Seek additional guidance from the superiors in the chain of command when risks associated with a mission seem unnecessary or exceed the commander's intent.

c. Comply with applicable Federal and Coast Guard safety and environmental health standards and regulations.

J. Safety and Environmental Health Personnel. The following personnel will support the safety and environmental health program:

1. Commandant (G-WKS) shall be staffed with personnel to support the safety and environmental health responsibilities of Commandant (G-CCS) and (G-WK).

2. MLC (kse) shall be staffed with personnel to support the safety and environmental health responsibilities of the MLC commander, including:

a. MLC Personnel. MLC personnel manage MLC safety and environmental health programs, provide advice to units, conduct safety and environmental health risk assessment surveys and unit support visits and other duties necessary to support the safety and environmental health responsibilities of the MLC commander.

b. MLC Detached Safety and Environmental Health Officers (SEHO). Detached safety and environmental health officers shall be sited remote from the MLC's at Integrated Support Commands to provide convenient and timely safety and environmental health services to the field. Detached officers shall make their services available to units in their geographic area of responsibility in accordance with the following priorities:

(1) Support of Marine Safety units.

(2) Support of respective ISC commander.

(3) Support of Area units.

(4) Support of District units.

(5) Support of Headquarters units.

(6) Other requested support and consultation work in their respective geographic areas of responsibility.

(7)

c. Safety and Environmental Health (SEH) Technicians. SEH Technicians are senior Health Services Technicians or Marine Science Technicians collocated with SEHOs. They shall assist the SEHOs in providing convenient and timely safety and environmental health services to the field.

3. Unit Safety Officers. Commanding officers and officers in charge appoint unit Safety Officers. Coast Guard Regulations specify that executive officers or XPOs shall be designated in writing as safety officers of afloat units. Except for aviation units and units subordinate to groups, shore unit executive officers and XPOs shall also be designated in writing as the unit's safety officer. Safety officers shall be responsible to the commanding officer or officer in charge for carrying out the unit safety and environmental health risk management processes in accordance with this Manual and MLC policies. Group safety officers shall be designated as the safety officer for all subordinate units and have cognizance over safety and environmental health matters for subordinate units.

4. Aviation Safety Officers. The terms aviation safety officer and flight safety officer are synonymous. Each aviation command shall have an assigned or appointed flight safety officer to advise and assist the commanding officer in matters pertaining to aviation safety, and particularly to manage the command's risk management processes. Specific duties of the aviation safety officer as well as the application procedure and qualification requirements are described in Chapter 2 of this Manual.

5. Unit Safety Coordinators. At units not subordinate to a group and assigned no primary duty safety petty officer, at least one unit safety coordinator (USC) shall be appointed to assist the safety officer in carrying out the unit safety and environmental health risk management processes in accordance with this Manual. Groups may direct subordinate units to assign unit safety coordinators to assist the group safety officer in carrying out his/her safety and environmental health risk management duties. USCs shall attend the Unit Safety Coordinator Course, G-KSE-060, before or as soon as possible after designation as a USC.

6. Preventive Medicine Technicians Assigned to a Clinic. Independent duty preventive medicine technicians (PMT) are Health Services Technicians specially trained to provide environmental health services, including water and waste water management, food service sanitation, thermal stress management, hearing conservation, and pest management. Independent duty PMTs are assigned to selected clinics and are available to provide services to units served by the clinic.

7. Primary Duty Safety Petty Officers. Marine Science Technicians have been assigned to selected units to assist the safety officer in carrying out the unit safety and environmental health risk management processes.

8. Industrial Hygienists. Industrial hygienists are civilian employees in the GS-690 series or military officers trained in the science and art of recognition, evaluation and control of environmental factors or stresses arising from the workplace which may cause sickness, impaired health or significant discomfort or inefficiency. Industrial hygienists are assigned to Commandant (G-WKS), MLCs, the Yard and other units with significant environmental health risks.

9. Safety and Occupational Health Specialists and Managers. Safety and Occupational Health Specialists and Managers are civilian employees in the GS-018 series or military officers assigned full-time safety and environmental health duties. They are assigned to Commandant (G-WKS), MLCs, or other units with relatively high risks.

10. Safety and Occupational Health Coordinators. Safety and occupational health coordinators are military personnel assigned to Marine Safety Offices who, as a collateral duty, manage risks inherent in the marine safety programs and especially to manage risks at marine safety and environmental incidents.

K. Safety and Environmental Health Information Resource Management. Information is an essential element of risk management programs. Safety and environmental health managers rely on internet resources, compliance checklists, data and automated systems to identify historical hazards, determine occupational disease and mishap trends, comply with Federal law, evaluate and quantify risks, manage abatement and control programs, archive information on occupational exposures, monitor units for compliance with safety and environmental health program directives, assess the effectiveness of control and abatement measures, determine costs of mishaps and occupational disease, and distribute information to users. Units and commands may use locally developed automated tools, and a number of automated systems have been developed for Coast Guard-wide use, including:

1. Mishap Data System. The Mishap Data System provides a means of reporting accidental injury, illness and property damage and analyzing mishap data.

2. Hazardous Condition Notification Systems (HCN). HCN provides a means of reporting and monitoring safety and environmental health hazards reported by employees or discovered through the risk assessment processes.

3. Industrial Hygiene Management Information System (IHMIS). IHMIS provides a means to collect and analyze chemical and physical energy exposure data and hazardous material data.

4. Hazardous Material Information and Reporting System (HMIRS). HMIRS provides units with hazardous materials information and management processes. HMIRS is available on compact disk (vessels only) and via the Internet.

5. Unit Safety and Environmental Health Checklists. These checklists are guides to be used by safety officers, unit safety coordinators and others for evaluating safety and environmental health programs and identifying safety and environmental health hazards.

6. Aviation Incident and Accident Tracking System (AVIATRS). AVIATRS is a system for reporting and tracking aviation and aviation-related mishaps, recommendations and corrective actions.

7. Occupational Medical Surveillance and Evaluation Program (OMSEP). The Occupational Medical Surveillance and Evaluation Program (OMSEP) utilizes a database to catalog exposure and medical examination data on members enrolled in OMSEP.

8. Unit Profile Database. Section 1.F.2.a. of this Manual describes the unit profile. The unit profile database captures and contains information on unit safety and health personnel and descriptions of unit operations and processes.

9. Other Internet Resources. The Internet has provided wide access to internal Coast Guard instructions and safety information. The MLC (kse) and Commandant (G-WK) websites provide safety and environmental health information and policies. External to the Coast Guard, other Federal agencies and private organizations provide regulatory information, consensus standards, guidance and recommended practices. OSHA, NIOSH, ACGIH, EPA, DOT, ANSI, NFPA, and DoD Service Safety Centers are just some examples.

L. Field Inputs to Program Revision. Field units are encouraged to provide constructive comments and suggestions to improve safety and environmental health risk management processes. Forward recommendations through the chain of command to Commandant (G-WKS).

M. Waivers. This instruction prescribes safety and environmental health risk management processes for use Coast Guard-wide. In unusual circumstances where the provisions of this instruction may be impossible or impractical or in instances where commands may wish to implement and evaluate locally developed processes with the objective of improving the Coast Guard's safety and environmental health program, the Commandant may consider waiving specific portions. Commands shall forward all requests for waivers through the chain of command and via the respective MLC to Commandant (G-WKS), specifying the item(s) of the instruction covered by the request, accompanied by a description of the requested alternative, a justification for the request and the requested time period, not to exceed two years.

N. Training. Training is considered an integral part of any safety and environmental health risk management program. Training, whether formal or informal, is a prerequisite to recognizing hazards, assessing risks and controlling them. Safety and environmental health training ranges from brief on the job training by supervisors or more experienced co-workers to lengthy formal training schools. Formal training responsibilities include:

1. Headquarters (G-WKS) training responsibilities shall include the following:

   a. Establishing courses and promulgating course descriptions in COMDTNOTE 1540 located on the Training Quota Management Center (TQC) website.

   b. Collecting and analyzing training course requirements from the MLC (kse)s.

   c. Prioritizing quota requests.

   d. Participating in G-WTT AFC56 Prioritization Panel to secure quotas and funding for safety and environmental health courses.

   e. Managing certain courses directly and supervising MLC course management.

2. MLC (kse) training responsibilities include the following:

   a. Advising Commandant (G-WKS) of emerging training requirements.

   b. Collecting training course requirements from field activities.

c. Collating and summarizing field training requirements and advising Commandant (G-WKS) of field training needs necessary to manage the Coast Guard-wide training program.

d. Managing individual courses, including contracting with vendors, selecting students, initiating orders via the appropriate training management systems or by preparing slates, approving substitutions and monitoring course applicability and quality.

e. Providing instructors and training at field units as required.

3. Unit training responsibilities include the following:

a. Providing general safety and environmental health training, e.g., motor vehicle safety, respiratory protection, hazard communication for workplace materials, operational risk management, etc., as an integral part of the command safety program.

b. Requesting training support from the MLC (kse) as needed.

c. Requesting specific safety and environmental health Class C training courses for members as required for their assigned duties.

d. Documenting attendance at required training courses, including dates, topics, length, instructor(s), and syllabus or other source of topic instruction, in a manner that permits ready review of training status.

O. Definitions.

1. Annual Unit Safety Inspection. A comprehensive, detailed inspection of a unit's safety and environmental health programs, spaces and equipment by a person or persons trained in the recognition, evaluation and control of risks.

2. Coarse Risk Analysis. A method of analyzing and assessing risks using trained facilitators, experienced subject matter experts and software tools.

3. Consensus Standards. Consensus standards are standards and codes developed by knowledgeable personnel of a profession, industry or discipline and published by an association, institute or organization to codify safe practices or designs. Consensus standards may be made mandatory by reference in a Coast Guard directive or, in the event no Coast Guard directive or standard exists, shall be used as guidelines where applicable.

4. Designated Agency Safety and Health Official (DASHO). The DASHO is the individual who is responsible for the management of the safety and health program within an agency, and is so designated by the head of the agency in accordance with the provisions of 29 CFR 1960.6 and Executive Order 12196.

5. Detailed Risk Analysis. A careful investigation of a specific operation, process, facility or piece of equipment to assess risks.

6. Employee. Any person employed or required to work for the Coast Guard, including members of the Coast Guard Reserve and Coast Guard Auxiliary when performing Coast Guard activities, without regard for compensation.

7. Formal Unit Safety Inspection. An inspection performed at least annually (or semi-annually for high risk operations) by unit or MLC personnel qualified to recognize hazards, evaluate risks and recommend general abatement procedures, e.g., trained Unit Safety Coordinator or MLC safety professional. The formal unit safety inspection includes all machinery, spaces, procedures, and unit programs, using appropriate sections of the unit safety and environmental health checklists promulgated by Commandant (G-WKS). High hazard operations and equipment shall be inspected more frequently.

8. Hazard. Any real or potential condition that could cause death, injury or occupational illness to personnel; damage to or loss of property; or mission degradation.

9. Headquarters MLC Safety and Environmental Health Program Evaluation. A biennial evaluation of an MLC's safety and environmental health support program and risk management processes by Commandant (G-WKS).

10. High Hazard Operations and Equipment. Workplaces where there is an increased risk of mishap, injury, or occupational illness due to the nature of the work performed. These workplaces may be determined by regulatory requirements, Coast Guard instruction or procedures, consensus standards, recommended practices, guidance, and individual command hazard identification. Such workplaces include those conducting refueling and heavy industrial operations; using heavy equipment; and using, handling or storing significant quantities of hazardous materials. Specific operations including but not limited to extensive confined space entry, hot work, working aloft, material and weight handling and machinery operation may fall into this category. Even climatic conditions may influence this determination. What may be routine in warm climates may present higher hazards in cold climates.

11. Industrial Hygiene. The science and art devoted to the anticipation, recognition, evaluation and control of those environmental factors or stresses arising from the workplace which may cause sickness, impaired health and well-being, or significant discomfort and inefficiency, or which could adversely affect the Coast Guard's mission capability.

12. Inspection. A comprehensive survey of all or part of a workplace in order to detect safety and environmental health hazards.

13. Mishap. An unplanned, unexpected, or undesirable event or series of events resulting in death, injury, occupational illness, or damage to or loss of materiel. For civilian employees, any occupational illness or injury reported on a Form CA-1 or CA-2 to the Office of Worker's Compensation, Department of Labor, is a recordable mishap and shall be reported via the Mishap Reporting System.

14. Operational Risk Management. A continuous, systematic process of identifying and controlling risks in all Coast Guard operations and activities by applying appropriate management policies and procedures as described in Operational Risk Management, COMDTINST 3500.3. This process includes detecting hazards, assessing risks, and implementing and monitoring risk controls to support effective, risk-based decision-making

15. Probability. The likelihood that a specific event will occur.

16. Risk. The chance of personnel injury or death and/or property damage or loss. Risk is generally a function of the probability that a hazard will lead to an undesirable event and the likely severity of that event.

17. Risk Assessment. The systematic process of evaluating the level of risk associated with a hazard, categorizing the risk and assigning a confidence level to the categorization.

18. Risk Assessment Code. A code that describes a risk as being in one of five categories according to its severity and probability.

19. Risk Management. The systematic process of maintaining risks at acceptable levels. Some risks are inherent in everyday life and the Coast Guard mission, but risks without a commensurate return in terms of real benefits are to be avoided. The GENERAL risk management process includes hazard identification, risk assessment and risk control or abatement. Control or abatement of safety and environmental health risks is the objective of the Coast Guard's safety and environmental health program.

20. Routine Inspections. Inspections performed by unit personnel, possibly in conjunction with material inspections, to identify safety and environmental health hazards.

21. Safety Professionals. Safety and Occupational Health Specialists and Managers, Industrial Hygienists and military officers trained in those disciplines whose primary duties include oversight or support of risk management activities.

22. Severity. The expected consequences of an event in terms of injury, damage or impact on mission.

23. Special Emphasis Programs. Programs implemented to control a specific group of risks, e.g., aviation, vessels, environmental health, fire and traffic.

24. TWA (Time-Weighted Average). The average concentration of a chemical substance or physical energy measured or calculated for an 8-hour workday and 40 hour workweek.

25. Uniquely Military. Military equipment, systems and operations that are unique to the national defense mission such as military vessels, aircraft, weapons, operations of cutters and aircraft, search and rescue operations, associated research and development activities, and operations under emergency conditions. Operations, equipment and systems that are comparable to those of industry in the private sector such as vessel, aircraft and vehicle repair, overhaul, and modification; construction; supply services; civil engineering; medical services and office work are not uniquely military.

26. Unit Profile. A unit profile is a description of a unit's physical environment, its personnel, its activities and its operations, prepared by MLC personnel to facilitate support and oversight of the unit's safety and environmental health program.

27. Unit Safety Coordinator. Member assigned collateral duties by unit to assist in unit safety programs. Unit Safety Coordinator shall attend Unit Safety Coordinator training

28. Unit Safety and Environmental Health Committee. A committee to assist the unit safety officer in identifying and controlling safety and environmental health risks.

29. Unit Safety and Environmental Health Risk Assessment Survey. A periodic audit of unit level safety and environmental health risk management processes by the responsible MLC.

30. Workplace. The physical location where Coast Guard work is performed. Workplaces include shore facilities, vessels, aircraft, and anywhere on land or water not owned by the Coast Guard where Coast Guard military or civilian personnel are required to perform Coast Guard work.

CHAPTER 2. AVIATION SAFETY PROGRAM

A. Policy. The Coast Guard's overall safety policies, principles, goals, authorities, responsibilities and organization are defined in Chapter 1.

B. Goal. The goal of the Aviation Safety Program is to improve and support the operational readiness of aviation units by conserving human resources, equipment and other resources through a reduction in aviation mishaps. To accomplish this objective, this chapter sets forth the organization, responsibilities, requirements and procedures for promoting Coast Guard aviation safety.

C. Scope.

1. This chapter covers the basic tenants and philosophies of aviation safety along with the organization and responsibilities of the Aviation Safety Program.

2. To aid the Flight Safety Officers (FSO) in completing their duties, certain topics have been placed in separate chapters and enclosures. Chapter 3 provides guidance on mishap response, investigating and reporting. Enclosure (2) provides guidance on the Mishap Analysis Report (MAR) format and review process. The Medical Officer's Duties are covered in enclosure (3). Enclosure (4) outlines the procedures governing the Mishap Analysis Board (MAB). Enclosure (5) contains the Aviation Message Format used for reporting Class C, D and E mishaps. Enclosure (10) discusses the concept of safety privilege and confidentially. Enclosure (13) covers how to determine the cost of mishap damage.

3. The Aviation Safety Program is responsive to all aspects of Coast Guard aviation operations, including the Air Auxiliary Safety Program. The program provides for specific responsibilities, program organization and management, as well as procedures for reporting, investigating and reviewing aviation mishaps. This Chapter is a working reference for aviation commands and only aviation safety is discussed.

D. Commitment to Safety. Safety must be an integral part of all Coast Guard aviation activities. Each individual connected with aviation operations, whether in an operational or supporting role (e.g., aircrew, scheduling, maintenance), contributes directly to the effectiveness of the aviation safety program. All members must commit to a personal responsibility of safeguarding themselves; their fellow crewmembers and the property entrusted to their care. For aviation safety to be truly effective, safety must be a pervasive notion supported by leadership throughout Coast Guard aviation. The leadership and responsibility for the safety program must originate from top level managers at headquarters and follow the chain-of-command down to each individual in the field. Each level of command shall amplify the message of safety and enforce the rules and standards.

E. Risk Management. Operational Commanders, Commanding Officers of air stations and cutters with embarked aircraft, and aircraft commanders are continuously making operational mission decisions. As a mission progresses, each individual must

continually reassess the mission's urgency and benefits so as to balance the risks involved. The safety of the aircrew and aircraft must always be one of the primary considerations integrated into the fabric of aviation mission planning and execution. Operational Risk Management, COMDTINST 3500.3 (series) and Chapter 1 of this manual cover Risk Management.

F. Organization and Responsibilities. The Aviation Safety Program is organized to function through the chain-of-command. The Commandant promulgates policy and sets program requirements. Units implement the program at the operating level, supplementing policy and guidance with unit plans, instructions and supervision. The following safety staffs are established to oversee and support the administration of the program.

1. Headquarters.

a. The functions of Commandant (G-WK) and (G-WKS) are described in Chapter 1 of this Manual.

b. Commandant (G-WKS-1), the Aviation Safety Division, operates under the cognizance of Commandant (G-WKS).

(1) (G-WKS-1) is responsible for developing, coordinating, reviewing and implementing the policies, procedures and standards for the Aviation Safety Program. The Division shall also monitor and evaluate unit program implementation.

(2) Specific duties of Commandant (G-WKS-1) in managing the Coast Guard-wide Aviation Safety Program include:

(a) Develop, recommend and monitor safety program policies and procedures for implementation by Aviation Platform and System Managers, Facility Managers and Operational Commanders (Area, District and unit commanding officers).

(b) Ensure Directorate Chiefs, Program Managers and Operational Commanders (Area, District and unit commanding officers) are kept fully informed of aviation safety policies and programs.

(c) Review standards and guidelines of federal, state and civil aviation organizations relating to aviation safety. Evaluate the applicability, suitability and feasibility of Coast Guard adoption, including the related impact on field units.

(d) Interface with other program managers to ensure aviation safety is given primary consideration in all aviation decision making processes. Ensure that system safety, risk assessment and risk management are incorporated as an integral part of decision making

processes.

(e) Serve as Program Manager for Crew Resource Management (CRM) and Maintenance Resource Management (MRM). Regularly review and analyze aviation risks for policy adjustments to facilitate risk management and loss control. Develop and promote integration of risk management and loss control information into operational safety programs such as CRM, Operational Risk Management (ORM) and MRM.

(f) As force manager for Flight Safety Officers (FSO) billets. Oversee and coordinate selection, assignment and training of FSO's in coordination with the Aviation Assignment Officers (CGPC-opm) and the units. Mentor FSO's throughout all career stages.

(g) Oversee, coordinate and track safety training for commanding officers, FSO's and other aviation personnel. Develop safety courses as required. Track FSO and Accident Investigation Specialist (AIS) course completions and Mishap Analysis Boards (MAB) assignments.

(h) Maintain liaison with other military safety centers and civilian aviation safety organizations. Authorize dissemination of Coast Guard mishap information to other services (U. S. and Foreign) to enhance mishap prevention efforts. Exchange mishap information with other agencies and organizations having similar aircraft, equipment and missions to share information and research new avenues of risk management and loss control.

(i) Conduct unit recurring Aviation Safety Standardization visits of air stations to garner and share best practices, evaluate unit safety posture and gain feedback on Commandant (G-WKS-1) performance.

(j) Advise and assist responsible program managers to correct deficiencies.

(k) Develop, direct and implement special emphasis programs to address specific problem or issues to reduce mishaps and enhance loss control efforts.

(l) Participate as a member of the Aircraft Configuration Control Board (ACCB).

(m) Recommend policies and procedures to protect the public from possible hazards of Coast Guard aviation activities.

(n) Ensure all mishaps are investigated to determine the causes and corrective actions needed to correct hazards and prevent future mishaps. Convene and appoint Commandant MAB investigations of major aviation mishaps and other incidents as deemed necessary.

(o) Provide a WKS-1 Advisor for on-site guidance and support during the initial setting up of the mishap investigation.

(p) Support and monitor MAB activities until the final report, causes and recommendations are complete.

(q) Monitor and assist the chain of command in the Mishap Analysis Report (MAR) review and endorsement process.

(r) Coordinate the activities of the Commandant's Aviation Safety Board (CASB). Review MAB reports and coordinate CASB review. Prepare and submit CASB findings and recommended final action for aviation mishaps to the Chief of Staff for approval. Prepare approved G-CCS final action findings for dissemination.

(s) Maintain the **Av**iation **I**ncident and **A**ccident **Tr**acking **S**ystem (AVIATRS) and the **R**ecommended **A**ction **T**racking **S**ystem (RATS) databases. AVIATRS is a master file of Coast Guard aviation mishap reports. RATS tracks all aviation-safety related recommendations and corrective actions.

(t) Produce and publish the annual aviation safety report and other mishap statistical presentations. Provide mishap statistics to support unit aviation safety programs.

(u) Maintain the master files of all Coast Guard aviation MAR's.

(v) Review and process all Freedom of Information Act (FOIA) requests for Coast Guard aviation mishap information.

(w) Analyze aviation mishap data to determine aviation mishap patterns, and trends. Recommend changes to policies, practices, training, procedures or equipment

based on results. Widely disseminate aviation safety mishap data, information and other safety information to improve operational performance and promote loss control.

(x) Monitor all mishap recommendations and corrective action until completed. Advise and assist responsible organizations or offices to correct actual or potential conditions that could adversely affect aviation safety.

(y) Initiate and sponsor research and development projects, acquisition of equipment and enhancements to training and procedures that promote loss control and improve operational safety in the future. Review and coordinate initiatives of other agencies for use by the Coast Guard.

(z) Provide advice and technical assistance to the Auxiliary National Safety Director and District Auxiliary Aviation Safety Officers as needed on Coast Guard specific safety and aviation issue.

(aa) Coordinate with Coast Guard Auxiliary staff and appropriate Program Managers to assist with the management of the Auxiliary Aviation Safety Program. Maintain Auxiliary aviation mishap statistics. Participate in the review and recommendation process regarding changes to the program.

2. The Commandant's Aviation Safety Board (CASB) is composed of officers on the Commandant's staff having special knowledge of aviation operations, aeromedicine, engineering and safety. Commandant (G-WKS-1) is responsible for convening Mishap Analysis Boards (MAB) for investigating mishaps. Commandant (G-WKS-1) and the CASB (the offices of Commandant (G-OCA), (G-SEA) and (G-WKH) will determine if an MAB should be appointed and the composition of the MAB. The CASB is responsible for the review of all significant (generally Class A and B) aircraft mishaps, as well as selected aviation mishaps and other aviation safety issues. The CASB is charged with the following duties:

a. Convening mishap investigations and analysis of other incidents when appropriate. These may be Class C, D or E mishaps or other situations deserving further evaluation to prevent future mishaps. The CASB will determine the review and endorsement process for these investigations.

b. Reviewing all aviation significant Mishap Analysis Reports of formally convened MAB's and forwarding recommended final actions to the Chief of Staff.

c. Submitting recommendations for Commandant action on safety,

operational and engineering policies, procedures and materiel to enhance loss control and prevent recurrence of mishaps. The CASB shall also make specific recommendations for additional local action when recommended action appears inadequate.

d. Act as an advisory board on matters pertaining to flight safety and other issues at the request of any CASB member.

e. Monitoring Coast Guard aviation operations and support functions to ensure effective risk management and safety policies are incorporated and integrated as essential components of successful mission accomplishment.

3. Area and District Commanders. Area and district commanders shall ensure that the provisions of this program are implemented. These commands shall also review and endorse aviation mishaps investigations of their subordinate commands as directed by Commandant.

4. Aviation Units and Afloat Commands with Aviation Resources.

a. The Commanding Officer (CO) of aviation units and afloat commands with aviation resources embarked are responsible for establishing and implementing a vigorous Aviation Safety Program. The effectiveness of the program is determined largely by the CO's interest and efforts. Effective aviation safety requires continuous command emphasis and leadership example. Experience has shown that a strong command mishap prevention policy will reduce aircraft mishap potential and thereby enhance overall mission effectiveness. Each aviation unit should have a Flight Safety Officer and when possible a Flight Surgeon to assist the commanding officer in implementing the Aviation Safety Program.

b. The Executive Officer (XO) organizationally is the unit's most senior safety representative. The XO shall act as the chair of the unit Health and Safety Board and supervisor of the Safety Department Head.

c. Each aviation command shall have an assigned Flight Safety Officer to advise and assist the commanding officer in planning, implementing and coordinating the unit's Aviation Safety Program. The Flight Safety Officer's unique position in relation to the unit commanding officer must not preclude close liaison with other officers, especially with the executive officer. At units with 20 or more pilots assigned, an Aviation Safety Department shall be established and the Department Head shall not be assigned other major collateral duties. Units with less than 20 pilots are encouraged to establish an Aviation Safety Department and may assign the Department Head other collateral duties. Other collateral duties shall be kept to a minimum and should avoid any possible conflicts of interest, such as operational scheduling or maintenance release authority of aviation resources. Duties of the

Flight Safety Officer include:

(1) Act as the CO's representative and advisor on all aviation safety matters.

(2) Report to the CO at least monthly regarding the unit's safety posture.

(3) Act as a member of the unit's safety and health committee. If applicable, represent unit at host facility safety and health committee.

(4) Liaison with support facility (e.g., other agency host facility) on aviation safety matters and to consolidate mishap prevention programs.

(5) Distribute aviation safety literature to ensure it receives widest readership possible and that all hands have access to it. Consideration should be given to publishing a unit newsletter.

(6) Manage a unit safety incentive/suggestion program stressing individual achievement.

(7) Coordinate and present aviation safety training.

a. Periodic aviation equipment/clothing inspections.

b. Survival training for unit personnel.

c. Egress training.

d. Safety training for line personnel.

e. Physiological training.

f. Operational Hazard Training. (See section H.4)

(8) Submit to the command, at least annually, a written Unit Aviation Safety Survey covering all phases of the unit's aviation operations. (See paragraph G.3 for survey details).

(9) Ensure completion of aviation mishap reports according to Enclosure (5). Monitor and report to the CO, progress of corrective actions.

(10) Maintain files of unit and other mishap reports. It is recommended that an aviation safety trend analysis be conducted, and presented to the commanding officer on a regular basis. An annual compilation and review of mishaps and trends can be included in the aviation safety survey. (Contact Commandant (G-WKS-1) for mishap statistics and other data from AVIATRS.)

(11) Update and **annually exercise** the unit's Pre-Mishap Plan. Consider conducting alternating tabletop and field exercises of

pre-mishap plan.

(12) Maintain and periodically inventory the unit aircraft crash investigation kit.

(13) Recommend the composition of the unit Permanent Aviation Mishap Analysis Board to the command.

(14) Maintain an aircraft mishap analysis study kit for members of the Unit Permanent Mishap Analysis Board.

(15) Conduct annual training for the Unit Permanent Mishap Analysis Board members. Placing particular emphasis on protection of the crash site and wreckage, photographic documentation crash site hazards and collection of all pertinent logs and records.

(16) Administer a unit-level anonymous reporting program for identifying unsafe conditions.

(17) Act as a member of the unit's Flight Standards Board at the discretion of the command.

(18) Review, distribute and publicize appropriate and timely information contained in safety supplements to aviation manuals.

(19) Perform other functions, as the situation and environment demand to further the aviation safety program at the unit level.

d. A Unit Permanent Mishap Board shall be assigned at each air station. Members of the board, as appointed in the unit pre-mishap plan, must be thoroughly familiar with procedures and requirements before a mishap occurs. Each member should have a working knowledge of the Safety and Environmental Health Manual, COMDTINST M5100.47 (series), relevant directives and aircraft mishap analysis procedures. Investigative action by the unit permanent mishap board should be limited to securing and protecting the mishap site and gathering records and files.

(1) The unit's Pre-Mishap Plan shall provide guidance to ensure the effective completion of the numerous time-critical tasks required as a result of a major mishap. Permanent Mishap Board members and their alternates must be clearly identified in the Pre-Mishap Plan. Their respective duties must be delineated **prior** to the mishap.

(2) If the CASB delegates a significant mishap investigation to the unit, employment of the Unit Permanent Mishap Board should be considered. Commandant (G-WKS-1) can arrange for supplemental members (i.e. Standardization Team member, Flight Surgeon, etc.) and technical assistance, if requested.

e. The Deployed Flight Safety Officer (DFSO) shall be an aviation officer designated by the parent command and assigned to the deployment. Designation should be based upon professionalism, judgment and maturity. If more than two pilots are deployed together, the senior aviator shall not normally be assigned as the DFSO. If the DFSO is not a formally designated Flight Safety Officer, the unit FSO shall train the DFSO to effectively handle routine safety matters. The DFSO duties shall include the following:

(1) Advise the deployment senior aviator, and as appropriate, vessel commanding officer or the operational commander on all matters concerning aviation safety.

(2) Prepare aviation mishap reports for review by the senior aviator. The vessel commanding officer or the operational commander may release reports.

(3) Ensure the deployed unit has adequate Pre-Mishap and Salvage Plans.

(4) Conduct aviation related safety training for the deployed unit's personnel with emphasis on shipboard or deployed unit emergency procedures.

f. The Flight Surgeon shall assist the command in aeromedical aspects of aviation safety. When a flight surgeon is not assigned, the unit commanding officer shall arrange to procure locally the services of such personnel. Specific training requirements for the Flight Surgeon are covered in the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series). All Flight Surgeons, should:

(1) Be thoroughly trained in human factors evaluation, medical pre-mishap planning, medical investigation of aviation mishaps, and their role as a member of the Unit Permanent Mishap Board and an MAB.

(2) Be appointed in writing as a member of the Unit Permanent Mishap Board.

(3) Participate in unit pre-mishap planning.

(4) Participate fully in the investigation and reporting of physiologic hazards, human factor hazards or any other hazard with aeromedical implications.

(5) When requested, immediately perform physical examinations and laboratory studies on individuals involved in an aviation mishap from any military service.

(6) Participate in all salvage efforts whenever recovery may include human remains.

(7) Participate fully in assigned mishap investigations and all deliberations of the MAB.

g. The Senior Aviator (Deployed) shall advise the commanding officer of the host vessel or the operational commander of the deployment, on matters concerning aviation safety. This is in addition to the responsibilities defined in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series).

h. The Ground Safety Officer (GSO) shall be the command's advisor and representative on all OSHA and ground safety matters. The GSO shall complete the Unit Safety Coordinator Course (G-KSE-060). The Ground Safety Officer role can provide grooming towards progression to the unit FSO. While not under the purview of the Aviation Safety Program or this Chapter, duties of the GSO include:

(1) Liaison with District, MLC and Commandant (G-WKS-2) for guidance in administering and managing the ground safety program.

(2) Developing a written unit safety program which paralleling the MLC Shore Safety Program.

(3) Administering the safe driver and traffic safety programs.

(4) Administering office, home off-duty and recreational safety programs.

(5) Administering and managing the hazardous materials program (if not assigned to another collateral duty officer).

(6) Investigating, reporting and tracking non-aviation mishap reports and submitting the required Mishap Reports (MISREPs).

(7) Administering and managing programs to implement OSHA and Commandant regulations and directives related to safety and environmental health.

(8) Coordinating with the FSO on the areas where flight and ground safety overlap.

(9) Coordinating and providing unit safety and occupational health training and awareness.

(10) Conducting annual unit safety inspections as described in Chapter 1 of this Manual.

(11) Identifying reporting and correcting unsafe and unhealthy work practices and conditions.

(12) Coordinating the Occupational Medical Surveillance and Evaluation Program with the MLC.

(13) Reviewing and assisting in the development of emergency plans and procedures.

(14) Coordinating with the host command on ground safety issues where appropriate.

(15) Other areas (where applicable) that the GSO should have cognizance and oversight are

(a) Ground support equipment.

(b) Maintenance and repair shop activities.

(c) Fire suppression and protection.

(d) Hazardous condition identification and reporting.

(e) Explosive proof equipment and facility wiring.

(f) Respiratory protection program.

(g) Confined space testing program.

(h) Hearing and sight conservation program.

i. The Salvage Officer, normally assigned from the Aviation Engineering Department, shall maintain the unit Salvage Plan and regularly inspect the salvage gear.

(1) The Salvage Officer should work closely with the Mishap Investigation Board to document damages that may occur during salvage. The recovery and salvage of a mishap aircraft are the responsibility of the reporting custodian (normally the Commanding Officer of a Coast Guard aviation unit or Coast Guard cutter with a deployed helicopter).

(2) The Aeronautical Engineering Maintenance Management Manual, COMDTINST Ml3020.1 (series) further defines specific command, district, area and headquarters responsibilities for the various elements of the salvage/recovery effort. It also contains a list of reference material pertaining to helicopter salvage and recovery.

(3) Headquarters support is available for coordinating assistance from other services or agencies, technical information, exceptional funding requirements, etc., which are beyond the capability of the individual unit or district.

j. Safety Petty Officers (SPO). Commands are encouraged to assign appropriate Petty Officers as SPOs for individual shop spaces. SPOs will provide safety leadership and monitor safety practices among all levels of maintenance and non aviation activities. SPOs should present a sound safety role model and does not necessarily have to be the senior shop petty officer. Selection of the proper individuals for safety

positions is critical to the success of the Aviation Safety Program. Individuals must be open to new ideas and easily approachable by both junior and senior personnel. Additional safety training courses for SPOs is highly recommended and can be coordinated though the MLC's.

G. Audits and Inspections.

1. Commandant (G-WKS-1) Unit Recurring Aviation Safety Standardization Visits. A member of the Aviation Safety Division staff will visit each aviation unit every three years to examine the Aviation Safety program at the operating level. At units where the CO is on a two-year assignment cycle, the visits should be biennial. Larger units or special situations may dictate more frequent visits. Assistance will be provided to the unit FSO in developing and/or maintaining the unit's Aviation Safety Program.

   a. These visits provide the units with direct feedback on the relative health of the unit's safety program, serve as a forum to garner and share best aviation safety practices and indicate the effectiveness of the support and guidance of Commandant (G-WKS-1).

   b. The Aviation Safety Division representative shall out brief the unit CO and provide safety training if coordinated in advance.

   c. To facilitate frank discussion of the unit safety posture, a written report of the visit results shall be returned directly to the unit.

2. MLC Inspections. MLC personnel shall make periodic unit inspections. These inspections will concentrate on environmental, occupational safety and health, facility safety and in general, ground safety concerns. The Program Manger for shore safety and environmental Health is Commandant (G-WKS-2).

3. Unit Aviation Safety Surveys. A detailed Unit Aviation Safety Survey shall be conducted whenever the commanding officer directs and at least annually. This all-encompassing report from the FSO to the CO should act as a "State of the Unit Safety" report. This survey is an in-depth audit of all phases of the unit's operations involving aviation safety. The survey should include; areas of mishap and hazard potential; causes and corrective actions relating to recent mishaps; operational hazards; status of training, proficiency and standardization; effectiveness of quality control; adequacy of supervision, personnel, safety equipment or ground facilities; dissemination of safety literature; physiological and psychological aspects pertaining to aviation safety. It should also include a unit personnel opinion poll of the unit's safety posture and a comparison to prior years. Instances of noncompliance, intentional or not, with prescribed practices or instructions should be included. The results of the survey shall be recorded and submitted to the Commanding Officer, who shall prescribe required corrective action. The FSO shall monitor corrective action and report uncorrected items in subsequent surveys.

H. Unit Training.

1. Pre-Mishap Training. The unit's Pre-Mishap Plan shall provide guidance ensuring effective completion of the numerous time-critical tasks resulting from a major mishap. Permanent Mishap Board members and their alternates must be clearly identified in the Pre-Mishap Plan. Their respective duties must be delineated **prior** to the mishap. The following training should be accomplished **annually**:

   a. Permanent Mishap Board members and their alternates should receive annual training on their responsibilities after a mishap. The training should emphasize preservation of evidence, proper mishap documentation, mishap site hazards, post mishap responsibilities/duties and notification priorities. Unit-level Mishap Board member duties should not normally involve extensive mishap investigation.

   b. The Pre-Mishap Plan should be exercised or practiced annually by simulating a mishap and then accomplishing all the resulting required actions. It is recommended the unit alternate between tabletop and field drills to exercise the plan. Unit response and the Plan's effectiveness should be evaluated. Units are encouraged to periodically activate the pre-mishap plan to investigate Class C, D and E mishaps as a means of accomplishing annual training.

2. Safety Stand Down. At least annually, each aviation unit should discontinue their regular work routine for at least one workday to focus on safety procedures and concerns. This training should include topics applicable to all hands as well as specialized training for specific groups. Using speakers from outside the command will increase the effectiveness of the training. The stand down may coincide with normal post holiday or end of summer; "back-in-the-saddle" safety programs are scheduled as desired by the command. This venue may be appropriate for garnering input and/or reporting on the unit's Aviation Safety Survey.

3. Aircrew Flight Training. Realistic training within the bounds of safety is essential to the successful completion of aviation missions. Coast Guard pilots and aircrew must maintain sound knowledge of operational hazards, emergency procedures and aircraft systems, along with a high level of psychomotor skills to operate complex platforms safely and successfully. Effective and focused use should be made of precious training time (both in the air and in the simulator) to maximize the benefit to both individual and crew performance.

4. Operational Hazard Awareness Training. An operational hazard is any condition that affects or may affect the safety of Coast Guard aircraft, personnel or equipment. Commanding officers shall ensure that local operational hazard awareness training is incorporated into the unit training program to instill personal awareness and reduce mishap potential. This

training shall be provided to all pilots and aircrew members on initial assignment to the unit and annually thereafter, per the Coast Guard Air Operations Manual, COMDTINST 3710.1 (series). Emphasis shall be given to operationally or geographically unique hazards. Operational hazard awareness training should include, but is not limited to the following:

a. Weather services and facilities.

b. Aircraft maintenance or inspection.

c. Aircraft ground support services.

d. Operation and maintenance of airfield, cutter facilities and services.

e. Navigation aids (en route and approach facilities).

f. Procedures, techniques and instructions in management of air traffic.

g. Regulations, procedures or policies published by FAA, ICAO, DOD and the Coast Guard.

h. Aviation publications and/or procedures (including aircraft flight and maintenance manuals).

i. Aviation operations areas (e.g., low level wires, remote landing sites, high density traffic areas, etc.) within the local flying and deployed locations.

j. Aircraft and aircrew survival equipment for local operating areas and deployed locations.

k. Other applicable areas (e.g., risk management, mission tasking and mission planning).

5. Cockpit Resource Management (CRM) Training. Human error mishaps account for approximately 80% of aviation mishap losses in the Coast Guard. CRM training is a valuable tool aimed at reducing human error mishaps by improving individual and crew performance.

a. CRM training courses concentrate on improving individual performance and teamwork (crew) skills by emphasizing the following objectives:

(1) Determining and analyzing ones own personality traits as they relate to aircrew interaction and problem solving.

(2) Improving personal and crew communication skills.

(3) Developing and improving participation as an individual and crewmember in a positive and assertive manner.

(4) Developing and enhancing individual and crew situational awareness skills.

(5) Identifying hazardous trends and attitudes through analysis of past human error mishaps.

(6) Presenting a risk management methodology that can help individuals and crews identify and prevent or mitigate hazardous situations.

b. CRM Training Schedule.

(1) Initial Coast Guard CRM training (two-day course) will be completed within three years of assignment to pilot or aircrew status and recorded in the aircrew member's training record and the AMMIS database. Initial training may be completed by ATC Mobile, the "A" school in ATTC Elizabeth City, North Carolina or at the C-130 Transition Course. The three-year initial training window allows unit flexibility and new aircrew members an opportunity to obtain actual operational experience prior to CRM initial training.

(2) Refresher CRM training is required biennially. Refresher training is now part of the annual pilot proficiency course curriculum at ATC Mobile. C-130 pilots (and some aircrew) receive their refresher training in conjunction with their annual proficiency course. Most enlisted aircrew attend CRM refresher training during the unit's ATC Mobile Standardization Visit. Unit FSO's receive re-certification training to teach the CRM Refresher Course.

(3) Aviation personnel failing to complete the CRM Initial Course or CRM Refresher Course on schedule shall request a waiver in writing from Commandant (G-OCA) prior to continuing operational flying. Upon Commandant (G-OCA) approval, the individual may continue to fly subject to the conditions of the waiver.

6. Maintenance Resource Management (MRM) Training. Maintenance errors contribute to approximately 20% of DOD and commercial aviation mishaps. The Coast Guard's aviation maintenance error rate is equivalent 20-22%, with associated mishap cost total over $850,000 annually. Many factors such as decreased experience levels, operational tempo, and cannibalization may impact mishaps rates. The losses are unacceptable and place our crews at risk. MRM has proven highly effective in the private sector and applies contemporary human factors knowledge to the aviation maintenance arena. Commercially provided MRM training and a CG MRM test program at several CG air stations yielded positive feedback.

a. A Coast Guard tailored MRM program, developed from commercial and DOD material, is being implemented Coast Guard-wide. The goal is to implement this program at all air stations by the end of March 2002.

b. Consistent with unit feedback, it will be taught by "the Coast Guard's own" petty officers/CPO's and use real Coast Guard mishap case studies.

c. The nature of course material delivery (i.e., MRM principles covered each month or in its entirety during a one day stand down) is at the discretion of the Unit.

I. Flight Safety Officer (FSO) Selection/Assignment. Commandant (G-WKS-1) will select prospective FSO's and/or trainees based on the recommendation of the unit commanding officer and needs of the service. Normally, a prospective FSO will not be trained until designated as an Aircraft Commander and selected for an FSO position. An aviator with a flight safety designation from another service may apply for designation once qualified as a Coast Guard Aircraft Commander. Multiple tour FSO's can expect additional specialized training for refresher and/or continuing education purposes.

1. Application Procedures. Commandant (G-WKS-1) will screen FSO applicants. Applications should be made early (preferably the fall prior to desired FSO assignment), as there can be a considerable delay for FSO school openings. Application letters should be submitted to Commandant (G-WKS-1) via the CO. Include the following information:

a. Present pilot designation, aircraft type. If not yet an Aircraft Commander (AC), expected AC syllabus completion date.

b. Year of Commission and source.

c. Previous education and degree(s) held.

d. Safety background, experience or training. (If assigned as GSO, duties completed and accomplished should be noted.)

e. Expected rotation date from unit.

f. Aviation experience, flight hours in type.

g. Prior service aviation qualifications.

h. Personal reasons for requesting a safety career. Take some time composing this section; it serves as a main discriminator between applicants.

2. Commanding Officers Endorsement. Each application for FSO must be endorsed by the applicant's command. The strength of the command endorsement is often the final determining factor for FSO selection. Commanding Officers endorsements shall be based on:

a. Judgment. Superior judgment is more critical than superior aviation skills.

b. Proficiency and Experience. The applicant's experience and ability as an aviator should be sufficient to establish and maintain credibility as a

safety role model to aircrew and pilots.

c. Interpersonal Skills. Applicant should have good rapport with fellow officers and enlisted personnel. The Officer should be patient, tactful and possess outstanding personal communication skills.

d. Remaining Tour Length. In most circumstances, applicants will be expected to act as the unit FSO for a minimum of two years following designation.

3. Assignment Officer Interaction. FSO applicants should note "FSO application" in their E-resume and include rank order of desired FSO billets from the shopping list.

J. Accident Investigation Specialist (AIS). Fully qualified FSO's, with at least two years as a unit FSO, are eligible for the AIS designation following completion of additional mishap investigation courses. AIS minimum requirements include Commandant (G-WKS-1) approved courses in the following areas:

1. Human Factors.

2. One of the following investigative courses:

a. Aircraft or Helicopter Accident Investigation or Aircraft Crash Survival (Basic)

b. Aircraft Engine Accident Investigation or Aircraft Crash Survival (Advanced)

3. Aircraft Accident Photography is recommended.

K. Mishap Cockpit Voice and Data Recorders. The majority of Coast Guard aircraft have mishap recorders. Due to the nature of the data that is captured, aviation engineering has requested that these devices be used, under certain circumstances, to assist in maintenance troubleshooting activities. When a non-Class A or B mishap occurs, where maintenance related data captured on the recorders could be of value, the following procedures shall be followed to ensure the process and system are safeguarded:

1. Contact Commandant (G-WKS-1) and (G-SEA) for authorization to remove the unit from the aircraft. Commandant (G-WKS-1) and (G-SEA) will consult with AR&SC to determine the need to remove the recorder. Figure 2-1 should be used for requesting download of recorders.

2. Only the CO can authorize aircraft flight without a mishap recorder.

3. AR&SC will download the data portion only from the recorder to conduct the necessary analysis. If audio downloading is required to check for ambient noises or to conduct frequency analysis, permission must be received from Commandant (G-WKS-1).

NOTE: Raw flight data and animations made solely from flight recorder data are not exempt from public release, provided they do not contain privileged safety information (e.g., MAB

opinions, speculation or conclusions). While transcripts of the relevant portions of the cockpit voice recorders are not exempt from public release, the actual cockpit voice recordings and the names of the individuals whose voices are captured may be safeguarded due to privacy concerns and thus not disclosed.

Figure 2-1
VOICE AND/OR FLIGHT DATA RECORDER DOWNLOAD REQUEST MESSAGE

P ######Z MON 01
FM COGARD AIRSTA SAMPLE
TO: COMDT COGARD WASHINGTON DC//G-WKS/G-OCA/G-SEA//
INFO: COGARD AR SC ELIZABETH CITY NC//APPROPRIATE ACFT PLM/EISD//
BT
UNCLAS FOUO //N03750//
SUBJ: VOICE AND/OR FLIGHT DATA RECORDER DOWNLOAD REQUEST
1. AIR STATION: _____
2. AIRCRAFT TYPE: _____; CGNR_____.
3. BRIEF EVENT DESCRIPTION (DO NOT INCLUDE PRIVILEGED INFORMATION): _____.
4. REASON FOR DOWNLOAD REQUEST: (MISHAP INVESTIGATION; MAINTENANCE TROUBLESHOOTING; TRAINING)_____
5. REQUESTED PARAMETERS:
   A. _____
   B. _____
   C. _____
   D. _____(EXPAND AS NEEDED)
6. COCKPIT VOICE RECORDING IS/IS NOT BEING REQUESTED.
7. CURRENT LOCATION OF RECORDER:_____
8. AIRSTA REQUESTOR:
   A. RANK/NAME:
   B. TELEPHONE NUMBER:
   C. MAIL ADDRESS:
BT
NNNN

L. Near Midair Collisions and Midair Collisions. Near midair and midair collisions are extremely hazardous situations requiring special reporting procedures. The Coast Guard Air Operations Manual, COMDTINST M3710.1 (series) provides supplemental information to the reporting requirements listed below:

1. A near midair collision is an incident where the possibility of collision occurs when an aircraft passes within 500 feet proximity of another aircraft

(excluding normal formation or air intercept flights). Near midair incidents should be treated and reported as Flight-Related Class D mishaps.

2. A serious near midair collision (as defined in the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series) is an incident where the possibility of collision occurred (aircraft pass within 500 feet proximity) and:

   a. Either aircraft took violent evasive measures.

   b. Known or suspected injury, however slight, occurs to occupants of either aircraft.

   c. Significant attention is expected from the press.

   d. Pilot or crewmember of either aircraft felt there was a possible collision hazard between two or more aircraft.

   e. Another organization may take administrative action.

3. Serious near midair incidents shall be reported as soon as practical to Commandant (G-OCA) or Coast Guard Headquarters Command Center (G-OPF) by telephone. A Class D Flight-Related mishap message shall be sent within 72 hours.

4. Midair collisions, regardless of the amount of injury or damage, shall be reported immediately to Commandant (G-WKS-1) and (G-OCA) or Coast Guard Headquarters Command Center (G-OPF) via telephone. An aviation mishap message shall be submitted within 12 hours of the incident. Commandant (G-WKS-1) and the CASB will determine if a Mishap Analysis Board is to be convened.

5. Treat significant incidents involving TCAS (Traffic Collision Avoidance System) as Flight-Related Class D mishaps.

6. The pilot shall make an immediate voice report to the nearest FAA communication facility of any near midair or midair collision as defined by the Airman's Information Manual. See the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series) for reporting requirements.

M. Aviation Mishap Class C, D and E Investigation and Reporting. Guidelines and procedures for major (Class A and B) mishap response, investigation and reporting are covered in Chapter 3 and Enclosures (2), (4), (5) and (13). The following is specific guidance on investigating and reporting Aviation mishap Class C, D and E and other unit conducted mishap investigations. When any mishap occurs, it is necessary to investigate and analyze the mishap thoroughly. In this way, all mishap cause factors can be identified and full use made of lessons learned from the event. It cannot be over-emphasized that safety review and communication of mishap events (or potential events) is focused solely upon improving procedures and/or equipment and preventing future mishaps. Such review is not meant to punish, criticize or embarrass the personnel involved. Full, uninhibited exchange of information and communication of safety information is essential if safety efforts are to effectively evolve and proactively meet changing operation needs.

1. Reporting Class C, D and E Aviation Mishaps. Mishap messages are one of the most important avenues available to spread the word and keep safety awareness alive. The aviation mishap message is more than just a means of reporting an event for entry into the AVIATRS database. Each message helps raise service-wide safety awareness and increases mishap prevention.

   a. Aviation Class C, D and E mishaps are reported using the aviation mishap format in Enclosure (5). Enclosure (5) contains a line-by-line explanation of the message format and the list of choices used in the message format. Aviation mishap messages are maintained in the **AV**iation **I**ncident and **A**ccident **TR**acking **S**ystem (**AVIATRS**).

   b. The Aviation Class D mishaps can be used to report hazards. Hazards vary according to the severity of damage and/or injury they are **expected** to cause and the **probability** of that severity occurring. Hazard reports often have no or little property damage associated with them. Hazard reports are intended to eliminate hazards and have three purposes:

      (1) To report a hazard and the remedial action taken or recommended, so others may take similar action.

      (2) To report a hazard so another organization may determine appropriate corrective action.

      (3) To document a reoccurring hazard.

   c. The reporting custodian shall normally be the appointing and convening authority for Class C, D and E mishaps. A written convening order is not required. Verbal instructions to conduct an analysis followed by submission of the required mishap report are satisfactory.

      (1) Depending on the circumstances, unit mishap boards usually consist of one to three unit personnel. Member(s) need not be senior to the individuals involved. A Flight Surgeon or Medical Officer should be assigned to mishap investigations for incidents involving personnel injuries or human factor events.

      (2) Units are encouraged to periodically activate the Unit Pre-mishap plan and have the Unit Permanent Mishap Board investigate Class C, D and E mishaps as a training exercise.

   d. Commanding Officer's Endorsement/Comments. The CO shall review the mishap message to evaluate the circumstances surrounding the mishap and indicate recommends or corrective actions needed to correct the deficiencies and prevent similar mishaps. The CO should comment on cause factors and other aspects of the mishap. Comments should address human factor issues involved in the mishap.

e. Supplemental mishap messages for Class C, D and E mishaps are always acceptable. Supplemental messages should be sent when not all the required information is available at the time of initial reporting. This is strongly encouraged in those cases where the Aviation Safety Program is better served by getting the initial word out to the field in a timely manner. A supplemental message can be sent when the rest of the information is available. The overriding concern is to alert the field of a possible hazard in a timely manner (use Enclosure (5)).

NOTE: Do not list names or social security numbers of personnel involved in the mishap in any aviation mishap message.

2. Mishap Response and Reporting Deadlines. Timely mishap reporting is important so operational commanders, program managers and support managers can effectively investigate and analyze causal factors and take corrective action to prevent further mishaps.

   a. Class C aviation mishaps shall be reported by mishap message to Commandant (G-WKS-1) within 14 working days of the mishap (information to AIG 8907).

   b. Class D and Class E aviation mishaps shall be reported by mishap message to Commandant (G-WKS-1) within 21 working days of the mishap (information to AIG 8907).

   c. Meeting the above deadlines ensures that mishap prevention information reaches the field in a timely manner. Careful thought should be given when requesting a delay beyond the above deadlines. Supplemental messages are preferred, rather than **delaying the message until all information is available.**

   d. If deadlines cannot be met. The unit should request an extension from Commandant (G-WKS-1) either by telephone or email.

3. Delays. Do not delay reporting a mishap or sending a preliminary message for lack of information. If complete information is not available provide as much information as possible and send a progress/supplemental message when the other data becomes available.

NOTE: Delaying a Class C, D or E mishap message for cost data is not desired. This defeats the purpose of the aviation mishap message reporting system. A good approximation of cost is usually sufficient with a follow-up telephone call to Commandant (G-WKS-1).

4. Authorized AIG. AIG 8907 is the authorized AIG for safety of flight and aviation mishap messages. Commanding Officers of operational units should readdress relevant mishap messages to deployed crews. Include follow-on endorsements from the parent command, as appropriate.

5. Class C, D and E Formal Mishap Analysis Boards. If deemed appropriate, Commandant (G-WKS-1) or the CASB will be the appointing authority and will determine the MAB's composition and endorsement chain. These boards

may vary in composition according to the seriousness and complexity of the mishap. Such an analysis may be conducted in lieu of, or in addition to, the regular mishap analysis.

NOTE: The CASB may or may not appoint a MAB to investigate any incident regardless of the Class or amount of damage.

6. Extent of Investigation Efforts. The extent of investigation efforts should be tailored to the complexity and severity of each mishap. Factors influencing the scope of an investigation include severity of injury, extent of the property loss, probability of adverse public reaction, and future mishap potential. The convening authority determines the depth of investigative effort required for each mishap and the type and the composition of the Mishap Analyses Board to be assigned.

N. Hosting the MAB and Mishap Site Safeguarding. The Mishap Unit or unit nearest the mishap, if other than the mishap unit, will be designated as the host for the MAB. The unit will provide support, including; emergency medical care, clerical and other personnel as required; office space with secure storage capability; communications; transportation; specialized clothing; and other action necessary to minimize injury and damage, including:

1. Firefighting, rescue, medical support, other disaster control activities including limiting the exposures to hazardous materials.
2. Assisting rescue activities and investigators from other governmental agencies working on the scene.
3. Activating the unit permanent mishap board to protect and preserve vital evidence pending the arrival of the Commandant MAB. (See paragraph F.4.d for unit permanent mishap board responsibilities.)
4. Protecting the wreckage site until the arrival of the Commandant's MAB.
5. If wreckage falls into populated areas, determination will be made whether prompt removal is the best course of action. In questionable cases, consult with Commandant (G-WKS-1).
6. Providing a flight surgeon or medical officer to assist in the rescue of survivors and the recovery of human remains.

O. Other Reports and Requirements Associated with Mishaps. Often, when a mishap occurs, other Coast Guard directives also require reports. This duplicate reporting requirement arises because the results of the mishap analysis and the content of the mishap report may not be used as the basis of adverse personnel action against individuals. This paragraph points out other topics or requirements that are frequently addressed after a mishap occurs. Interested parties should refer to the current edition of Directives, Publications and Reports Index, COMDTNOTE 5600 (series) and current editions of specific directives to ensure that they are meeting all requirements. The Coast Guard Administrative Investigations Manual, COMDTINST M5830.1 (series) contains a comprehensive summary of these investigations and reports.

NOTE: In the case of casualty reports and NOK notification, 24-hour time limits are usual. These reports are NOT the responsibility of the President. Knowledge of their existence is helpful but MAB members need not get involved in the preparation of any report other than the Mishap Analysis Report.

1. Legal Investigations. Instructions, requirements, and procedures for legal investigations are contained in the Coast Guard Administrative Investigations Manual, COMDTINST M5830.1 (series) and the Claims and Litigation's Manual, COMDTINST M5890.9 (series).

2. Procedures for claims against the Government are contained in Claims and Litigation's Manual, COMDTINST M5890.9 (series).

3. Procedures for claims in favor of the Government are contained in Claims and Litigation's Manual, COMDTINST M5890.9 (series).

4. Procedures for property loss claims by Coast Guard personnel are contained in Claims and Litigation's Manual, COMDTINST M5890.9 (series). Also, see the Property Management Manual, COMDTINST M4500.5 (series) for loss of government property.

5. Investigations involving the National Transportation Safety Board and/or Federal Aviation Administration shall be conducted by mutual agreement between the various agencies involved.

6. Fatalities and Critical Injuries Notifications.

   a. Procedures for notification of next of kin are contained in the Personnel Manual, COMDTINST M1000.6 (series).

   b. Procedures for notification of the Commandant are contained in Personnel Manual, COMDTINST M1000.6 (series).

   c. Procedures for release of names to the public are contained in the Personnel Manual, COMDTINST M1000.6 (series) and the Public Affairs Manual, COMDTINST M5728.2 (series).

   d. Funerals, survivor benefits, and other information are contained in Personnel Manual, COMDTINST M1000.6 (series) and the Decedent Affairs Guide, COMDTINST 1770.1 (series).

P. Investigating Potential Criminal Acts (Including Sabotage). If the MAB suspects that the mishap was caused by misconduct, they must immediately suspend the investigation and report the supporting facts and evidence to Commandant (G-WKS). Commandant (G-WKS) under consultation with Commandant (G-LGL) and (G-LMI) will determine whether the safety investigation should be terminated and an appropriate criminal investigation initiated. Even if the safety investigation is terminated, MAB members must NOT disclose any privileged information to the criminal investigators.

1. If the determination is made to terminate the safety investigation, the senior member shall give all nonprivileged material to the criminal investigators and

provide the names of all known witnesses including those already interviewed by the MAB. This list shall indicate whether those already interviewed were promised confidentiality. The MAB president will ensure all privileged information is safeguarded and preserved. The safety investigation of specific issues may continue, but shall be subordinate to the nonsafety investigation.

2. If the criminal investigation concludes that the mishap is the result solely of a criminal act, a safety investigation will not be conducted. If a criminal act did not occur, or it appears that causes apart from the criminal act were involved, Commandant (G-WKS) will determine whether the MAB should continue its investigation.

FORMAT AND DIRECTIONS FOR COAST GUARD AVIATION MISHAP MESSAGE

FM (UNIT NAME)
TO COMDT COGARD WASHINGTON DC//G-WKS/G-OCA/G-SEA//
AIG EIGHT NINE ZERO SEVEN (Aviation mishaps of interest to all aviation units)
AIG EIGHT NINE NINE NINE (Aviation mishaps involving ship/helo operations)
AIG FOUR NINE TWO THREE (Aviation mishaps involving small boats or hoisting operations)
(CO's should readdress msgs to deployed crews, as appropriate)
(Add MLCA (kse) and MLCP (kse) if personnel injury or casualty involved)
(Other Addressees as appropriate)
BT
UNCLAS FOUO //N03750//
//
WHAT FOLLOWS MAY CONTAIN PRIVILEGED SAFETY INFORMATION.
USE FOR MISHAP PREVENTION PURPOSES ONLY.
//
SUBJ: AIRSTATION____, AIRCRAFT TYPE AND OPMODE_____, CLASS__ MISHAP
(**NOTE**: Information in SUBJ line should accurately reflect the mishap involved. SUBJ line is used for identification and message sorting and is not part of the AVIATRS database.)
A. SAFETY AND ENVIRONMENTAL HEALTH MANUAL, COMDTINST M5100.47
(Include other references as necessary.)
1. AIR STATION OR UNIT/_(CGAS EASTCOAST)**_// MISHAP REPORT NUMBER/_**(3-96)**_//**
2. AIRCRAFT TYPE/___(See list number 1)**___// COAST GUARD IDENTIFICATION NUMBER CGNR/__**(aircraft tail number)**__//**
3. MISHAP DESCRIPTION/__(One or two sentences briefly summarizing the mishap, one line descriptor of mishap)**__//**
4. OPMODE/__(See list number 1)**__// CLASS/___**(See definitions and list number 2)**_____//**
5. DATE/_____// LOCAL TIME/_____// PERIOD OF DAY/__(Light conditions based on time of day and time of year) (See list number 3)**___//**
6. LOCATION OF MISHAP/_____// LAT/LONG/ ___-_____N/___-_____W // (Brief description of where mishap occurred and as appropriate 00-00N/000-00W).
7. WEATHER AT TIME/PLACE OF MISHAP/__(sky/cloud conditions, visibility, wind, sea state, temperature, etc.)**__// METEOROLOGICAL CONDITIONS/__**(See list number 4)**__// OBSTRUCTIONS TO VISIBILITY/__**(if appropriate or a factor) (See list number 5)**__//**
8. FLIGHT INFORMATION.
A. MISSION/_(See list number 6)**___// FLT TIME/____**(0.0 hrs)**____// FLT PLAN/CLEARANCE/ __**(See list number 7)**_// DESTINATION/_**(Final destination of flight)**_//**
B. PHASE OR EVOLUTION AT TIME OF MISHAP/_(See list number 8)**_// AIRSPEED/_**(in kts)**_// ALTITUDE/__**(Altitude at time of mishap.) (See list number 9)**__//**
9. AIRCREW INFORMATION.
A. PILOT AT CONTROLS/___(See list number 10)**__// SEAT POSITION/____**(See list number 11)**___// DESIGNATION/__**(See list number 12)**___// TOTAL FLIGHT TIME/___// FLIGHT TIME IN TYPE/__// FLIGHT TIME LAST 30 DAYS/___// MONTHS AT UNIT/___//**
B. PILOT NOT AT CONTROLS/ ___(See list number 10)**__// SEAT POSITION/____**(See list number 11)**___// DESIGNATION/__**(See list number 12)**___//**

TOTAL FLIGHT TIME/____// FLIGHT TIME IN TYPE/____// FLIGHT TIME LAST 30 DAYS/_____// MONTHS AT UNIT/_____//

C. AIRCREW POSITION/DESIGNATION/__(See list number 13)**_// RATING/_**(See list number 14)**_// TOTAL FLIGHT TIME/___// FLIGHT TIME IN TYPE/___// FLIGHT TIME LAST 30 DAYS/___// MONTHS AT UNIT/_____//**

D. AIRCREW POSITION/DESIGNATION/__(See list number 13)**_// RATING/_**(See list number 14)**_// TOTAL FLIGHT TIME/___// FLIGHT TIME IN TYPE/___// FLIGHT TIME LAST 30 DAYS/___// MONTHS AT UNIT/_____//**

(Pilot at the controls is the pilot at the controls at the time of the mishap or during the incident being reported. If flight was single pilot, enter N/A for PILOT NOT AT CONTROLS. For GROUND mishaps, do not list pilot data unless the pilots were in the aircraft at the time of the mishap.)

(Add as many subparagraphs as needed. List aircrew information ONLY if there was an aircrew function involved in the mishap. For GROUND mishaps, list experience information for the aircrew involved in the incident.)

NO NAMES, RANKS OR SSN.

10. NARRATIVE/___(Brevity is desired, but provide a clear and complete picture of what happened. Include description of mishap causes, injuries and damages. Describe the sequence of events and circumstances leading to the mishap, what happened immediately after the mishap and any other details or information pertinent to the mishap and not described elsewhere in the message.)**_____//**

11. MISHAP DAMAGE AND COST.

A. COAST GUARD AIRCRAFT DAMAGE OR COMPONENTS INVOLVED IN MISHAP PARTS/____// COST/ ____// LABOR COST/ _____// TOTAL COST/ _____//

(List individual parts, components or aircraft damage after PARTS. List total parts cost after COST and labor cost (figured on $18 per hour) after LABOR. TOTAL cost is the total of PARTS and LABOR. If a more detailed description is necessary or desired, use the NARRATIVE or ADDITIONAL FINDINGS. Round cost to the nearest dollar. Specify new vs. overhaul cost as appropriate.)

B. OTHER COAST GUARD PROPERTY DAMAGE/__(Describe non aviation Coast Guard property damage)**___// COST/ _____//**

C. NON COAST GUARD PROPERTY DAMAGE/___(Includes other gov't as well as non gov't damage)**_____// COST/ _____//**

D. NUMBER OF INJURIES/___// FATALITIES/___// DAYS LOST/__//(days off work// restricted activity, SIQ, hospitalized, etc.)**___.** (List number of people injured or killed. Enter 0 if no injuries or fatalities.)

E. TOTAL COST/ $__(Sum of 10A, 10B and 10C)**__//**

(**NOTE:** List number of personnel injured. Details of injuries should be described in the narrative. Include rank, crew position, if applicable, and injuries of unit personnel, passengers or others involved. INJURY NUMBERS MUST AGREE WITH NARRATIVE).

****NO NAMES OR SSN****

(**NOTE**: Aviation mishaps involving personnel injuries must also be reported to the MISREP data base. The CG AVIATRS database does not capture injury data (SSN, name, age, days off, severity, etc.)) This is a function of the MISREP data base system.

12. A. ADDITIONAL INFORMATION/____(Text as appropriate. Include relevant information not included elsewhere in the message. Describe any item involved in the mishap that is not found elsewhere or in the narrative. Describe problems or complications caused by equipment (ALSE, Avionics, Rescue, NVG, etc) not operating as advertised. This includes positive as well as negative items.)**____//**

B. ENGINE MISHAP DATA/_____(For tracking purposes, list the phrase that best describes what happened to the engine as a result of the mishap). (See list number

15)_____//
13. RECOMMENDATIONS AND CORRECTIVE ACTIONS/___(List recommendations or corrective action taken to prevent future mishaps_____//
14. NAME, RANK, PHONE NUMBER OF PERSON TO CONTACT REGARDING MISHAP/_____//
15. COMMANDING OFFICER'S ENDORSEMENT/COMMENTS/_____//.
(The CO shall review the mishap report to evaluate the circumstances surrounding the mishap and indicate actions or recommends needed to correct the deficiencies and prevent similar mishaps. The CO should comment on cause factors and other aspects of the mishap. Comments should address human factor issues involved in the mishap.)
BT
NNNN

PICK LISTS FOR AVIATION MISHAP MESSAGES

List #1

AIRCRAFT	**OPMODE**
AUX	GROUND
HC130	FLIGHT
HH60	FLT-REL
HH65	
HU25	
VC4A	
VC20	

LIST #2 **MISHAP CLASS COST** (refer to COMDTINST M5100.47 (series) for more information)

CLASS A	Over $1,000,000 in Coast Guard aircraft damage, aircraft missing, abandoned or not economically repairable. Mishap results in fatalities or permanent total disability.
CLASS B	$200,000-1,000,000 in Coast Guard aircraft damage, permanent partial disability or more than five people hospitalized.
CLASS C	$20,000-200,000 in Coast Guard aircraft damage, nonfatal injury or occupational illness resulting in lost time from work beyond the day of the mishap.
CLASS D	Less than $20,000 damage, nonfatal injury or illness not meeting criteria for Class C mishaps. (includes Near Midair collision, Lessons Learned and other mishaps with significant mishap prevention information.)
CLASS E	Aviation incidents involving engine damage only, regardless of the damage cost. If the damage is not contained or not limited to the engine, the mishap will be reported according to the appropriate mishap Class. Class E mishaps can be Flight, Flight-Related or Ground Class E incidents also include Foreign Object Debris (FOD) Damage Incidents.

List #3 **PERIOD OF DAY**

DAY	DUSK	
DAWN	NIGHT	N/A

LIST #4 **METEOROLOGICAL CONDITIONS**

IMC	VMC	N/A

LIST #5 **OBSTRUCTIONS TO VISIBILITY**

BLOWING SAND	FOG/RAIN	RAIN/SNOW
BLOWING SNOW	HAZE	SEA SPRAY
BROWNOUT	MIST	SMOG
CLEAR	NO MOON	SMOKE
CLOUDS	NONE	SNOW
DUST	N/A	SUN
FOG	RAIN	VOLCANIC ASH
FOG/HAZE	RAIN/HAZE	WHITEOUT

LIST #6 **MISSION**

AI	COOP	ICE	MDP	OLP	SAR
ALPAT	DEMO	LE	MEP	OPS	TEST/FCF
AMIO	ELT	LOG	MER	PAO	TRNG
ATON	FERRY	M-OPS	MSO	PAX	
CARGO	FISH	MAINT	NVG	PHOTO	

LIST #7 **FLIGHT PLAN**

IFR	VFR
N/A	SVFR

LIST #8 PHASE

APPROACH	HOT REFUELING	PREFLT
AUTOROTATION	HOVERING	ROTOR ENGAGEMENT
CARGO	INFLIGHT	RS DEPLOYMENT
CLIMBING	INTERCEPTING	RUNUP
DEBARKING/EMBARKING	ITO	SEARCH/PATROL
DESCENDING	JACKING	SHUTDOWN
DROPS	LANDING	SIMULATED EMERGE
DUMPING FUEL	LEVEL FLIGHT	STARTUP
FINAL	LOADING/UNLOADING	STATIC DISPLAY
FORCED LANDING	LOW LEVEL	TAKEOFF
FORMATION FLIGHT	MAINTENANCE	TAXIING
FUELING	ORBITING	TEST/FCF
GO AROUND	OVERFLT/FLYBY	TIED DOWN/PARKED
GROUND HANDLING	OVER/WATER	TOUCH/GO
HFIR	PATTERN	TOWING
HOISTING	POSTFLT	WASH

Several choices may seem redundant, but some may better describe the actually situation at the time of the mishap.

LIST #9 ALTITUDE

AGL	FL	
AWL	MSL	N/A

LIST #10 PILOT IN COMMAND

PIC	NPIC

LIST #11 SEAT POSITION

RIGHT	LEFT

LIST #12 DESIGNATION

AC	FP
CP	IP
SP (student pilot)	

LIST #13 CREW POSITION/DESIGNATION

AV	AI	BA
DM	FE	FM
FS (flight surgeon)	HQBA	HS (corpsman)
LM	N	R
RS	SSO	

Refer to Chapter 8 of the Air Operations Manual (COMDTINST M3710.1) for information on aircrew designations

LIST #14 RATING

AMT	AVT	
AST		

LIST #15 ENGINE

FLAMEOUT	N/A
INFLT FAILURE	OVERHAUL
INFLT SHUTDOWN (w/restart)	REMOVE/REPLACE
INFLT SHUTDOWN (w/o restart)	SEL/3EL
INSPECTION	

Several choices may seem redundant, but some may better describe the actually situation at the time of the mishap.

Assigning Safety & Health Hazard Risk Assessment Codes (RAC)

RAC's are used to predict the relative risks associated with unabated safety and health hazards in the living & working environment. The RAC system is based on two factors: mishap probability and mishap severity. Following is a matrix to be used in assigning safety and health RAC's. For safety and environmental health the frequency (probability) of a mishap occurrence and its effects (severity) are used to define the risk. For occupational health hazards real or estimated measures of actual exposures (probability) along with potential medical effects of exposure (severity) are used to define the risk.

1. HOW TO USE THIS MATRIX

First. Determine MISHAP PROBABILITY by using chart #1 for safety and environmental health hazards or chart #2 for occupational health hazards (I, II, III or IV).

Second. Determine potential MISHAP SEVERITY by using chart #3 (A, B, C or D)

Third. Using the results from charts #1 or 2 and 3, use chart #4 to determine the RAC (1, 2, 3, 4 or 5).

CHART #1: SAFETY or ENVIRONMENTAL HEALTH MISHAP PROBABILITY

I	**Frequent:** one or more events per year.
II	**Likely:** several events during the life of a system or during a members career.
III	**Infrequent:** one event during the life of a system or during a members career.
IV	**Unlikely:** assume will not happen during the life of a system or during members career.

CHART #2: OCCUPATIONAL HEALTH MISHAP PROBABILITY (Exposure Dose; Measured or estimated without consideration for the use of PPE)

Level of Exposure	**Duration**	
	< 30 days/year	**30 days/year or more**
Less than (<) ¼ STEL or 8 hr TLV	**IV**	**IV**
Between ¼ and ½ STEL or 8 hr TLV	**IV**	**III**
Greater than (>) ½ but less than (<) STEL or 8 hr TLV	**III**	**II**
Equal or greater than (>) STEL or 8 hr. TLV	**III**	**I**

CHART #3: SEVERITY

	People	Property	Mission
A	Injury or illness resulting in death or a permanent total disability (Illnesses include: asbestosis, lung cancer, AIDS from blood exposure)	Cost of damage is $1,000,000 or greater	Inability to accomplish a critical mission
B	Injury or illness resulting in permanent partial disability (Illnesses include: elevated lead in small children, isocyanate sensitization, Hepatitis C)	Cost of damage is greater than $200,000 but less than $1,000,000.	Major impact on ability to accomplish a critical mission. Significant command attention.
C	Injury or temporary reversible illness resulting in loss of time from work beyond the day on which it occurred (Illnesses include: metal fume fever, adult elevated lead, food poisoning)	Cost of damage is greater than $20,000 but less than $200,000.	Moderate impact on ability to accomplish a critical mission. Limited capability but able to respond if needed.
D	Injury or temporary reversible illness requiring more than simple first aid treatment (Illnesses include: eye irritation, sore throat, mild poison ivy)	Cost of damage is greater than $1000 but less than $20,000.	Minor impact on ability to accomplish a critical mission. Operational nuisance.

CHART #4: RISK ASSESSMENT CODE

PROBABILITY	SEVERITY			
	A	B	C	D
I	**RAC 1**	**RAC 1**	**RAC 2**	**RAC 3**
II	**RAC 2**	**RAC 2**	**RAC 3**	**RAC 4**
III	**RAC 3**	**RAC 3**	**RAC 4**	**RAC 5**
IV	**RAC 4**	**RAC 5**	**RAC 5**	**RAC 5**

2. RISK DESCRIPTION AND ACTION FOR HAZARD ABATEMENT

RAC Number	Action
1	Stop operation, abate the hazard immediately through the use of engineering controls, administrative/work practice controls, or PPE. For occupational health hazards enroll personnel in OMSEP.
2	Use engineering controls, administrative/work practice controls, or PPE s to immediately control the hazard. If feasible & practical abate the hazard within 6 months. For occupational health hazards enroll personnel in OMSEP.
3	Use engineering controls, administrative/work practice controls, or PPE to control the hazard. If feasible & practical, abate the hazard within the normal 3 - 4 year engineering cycle. For occupational health hazards enroll personnel in OMSEP.
4	Maintain surveillance, abatement not required
5	Abatement and surveillance not required.